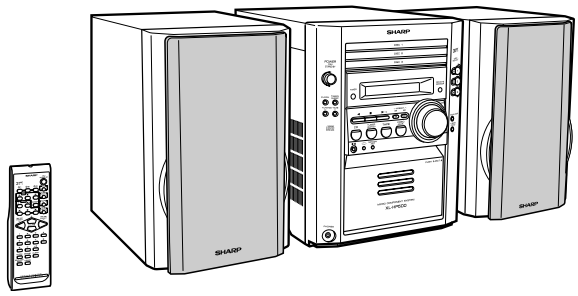
SHARP SERVICE MANUAL

No. SY298XLHP500/

MICRO COMPONENT SYSTEM



MODEL XL-HP500

XL-HP500 Micro Component System consisting of XL-HP500 (main unit) and CP-HP500 (speaker system).

COMPACT disc DIGITAL AUDIO CD-R/RW Playable 3 DISC

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

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SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

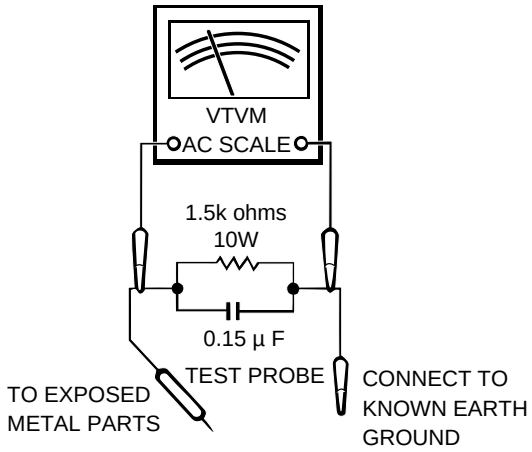
FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

IMPORTANT SERVICE NOTES (FOR U.S.A. ONLY)

BEFORE RETURNING THE AUDIO PRODUCT
(Fire & Shock Hazard)
Before returning the audio product to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the audio product.
2. Inspect all protective devices such as insulating materials, cabinet, terminal board, adjustment and compartment covers or shields, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

* Plug the AC line cord directly into a 120 volt AC outlet.
* Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as conduit or electrical ground connected to earth ground.
* Use a VTVM or VOM with 1000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor (See diagram).
* Connect the resistor connection to all exposed metal parts having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.



All check must be repeated with the AC line cord plug connection reversed.
Any reading of 0.3 volt RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the audio product to the owner.

SPECIFICATIONS

■ General

Power source	AC 120 V, 60 Hz
Power consumption	102 W
Dimensions	Width: 8-1/8" (205 mm) Height: 10-1/4" (260 mm) Depth: 14-7/16" (366 mm)
Weight	13.2 lbs. (6.0 kg)

■ Amplifier (Except for Canada)

Output power	50 watts minimum RMS per channel into 6 ohms from 60 Hz to 20 kHz, 10% total harmonic distortion
Output terminals	Speakers: 6 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms) Subwoofer pre-out (audio signal): 200 mV/ 10 k ohms at 70 Hz
Input terminals	Video/Auxiliary (audio signal): 500 mV/47 k ohms

■ Amplifier (For Canada)

Output power	RMS: 100 W (50 W + 50 W) (10 % T.H.D.)
Output terminals	Speakers: 6 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms) Subwoofer pre-output (audio signal): 200 mV/10 k ohms at 70 Hz
Input terminals	Video/Auxiliary (audio signal): 500 mV/47 k ohms

Specifications for this model are subject to change without prior notice.

■ CD player

Type	3-disc multi-play compact disc changer player
Signal readout	Non-contact, 3-beam semiconductor laser pickup
D/A converter	1-bit D/A converter
Frequency response	20 - 20,000 Hz
Dynamic range	90 dB (1 kHz)

■ Tuner

Frequency range	FM: 87.5 - 108 MHz AM: 530 - 1,720 kHz

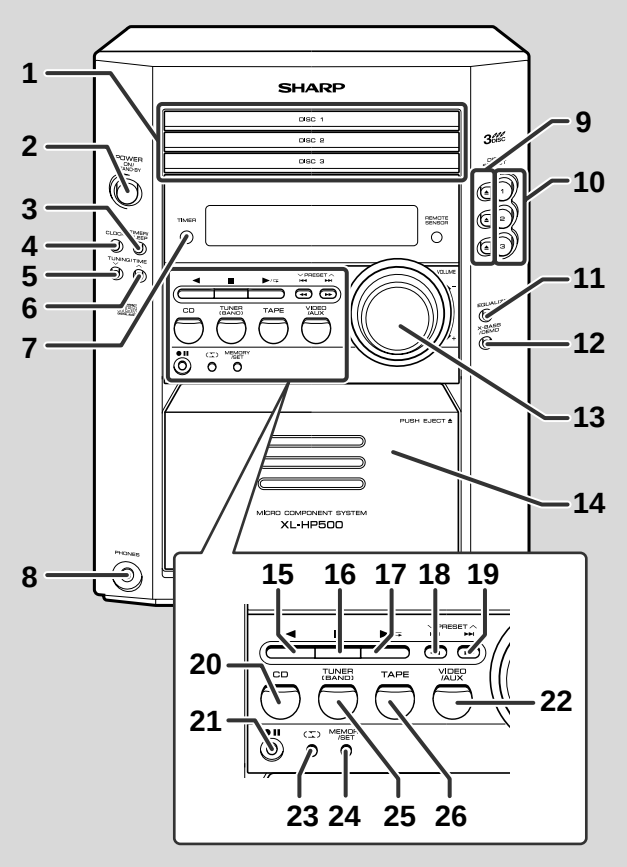
■ Cassette deck

Frequency response	50 - 14,000 Hz (normal tape)
Signal/noise ratio	50 dB (recording/playback)
Wow and flutter	0.3 % (WRMS)

■ Speaker

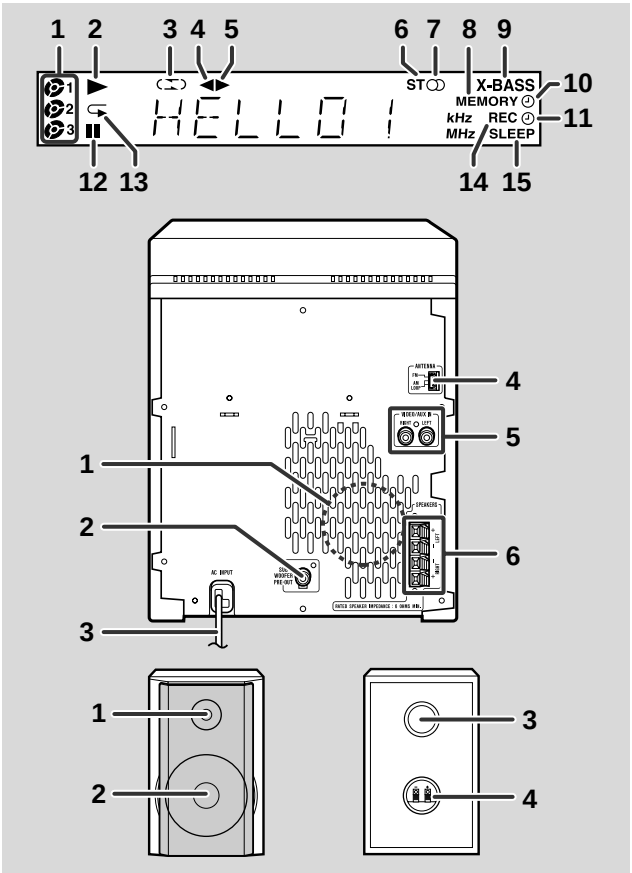
Type	2-way type speaker system 2" (5 cm) Tweeter 5-1/8" (13 cm) Woofer
Maximum input power	100 W
Rated input power	50 W
Impedance	6 ohms
Dimensions	Width: 6-1/2" (165 mm) Height: 10-1/4" (260 mm) Depth: 9-1/2" (241 mm)
Weight	5.5 lbs. (2.5 kg)/each

NAMES OF PARTS



■ Front panel

1. Disc Trays
2. Power On/Stand-by Button
3. Timer/Sleep Button
4. Clock Button
5. Tuning and Time Down Button
6. Tuning and Time Up Button
7. Timer Set Indicator
8. Headphone Jack
9. CD Eject Buttons
10. CD Direct Play Buttons
11. Equalizer Mode Select Button
12. Extra Bass/Demo Mode Button
13. Volume Control
14. Cassette Compartment
15. Tape Reverse Play Button
16. CD or Tape Stop Button
17. CD Play or Repeat, Tape Forward Play Button
18. CD Track Down or Fast Reverse, Tape Fast Wind, Tuner Preset Down Button
19. CD Track Up or Fast Forward, Tape Fast Wind, Tuner Preset Up Button
20. CD Button
21. Tape Record Pause Button
22. Video/Auxiliary Button
23. Tape Reverse Mode Select Button
24. Memory/Set Button
25. Tuner (Band) Button
26. Tape Button



■ Display

1. Disc Number Indicators
2. CD Play Indicator
3. Tape Reverse Mode Indicator
4. Tape Reverse Play Indicator
5. Tape Forward Play Indicator
6. FM Stereo Mode Indicator
7. FM Stereo Receiving Indicator
8. Memory Indicator
9. Extra Bass Indicator
10. Timer Recording Indicator
11. Timer Play Indicator
12. CD Pause Indicator
13. CD Repeat Play Indicator
14. Tape Record Indicator
15. Sleep Indicator

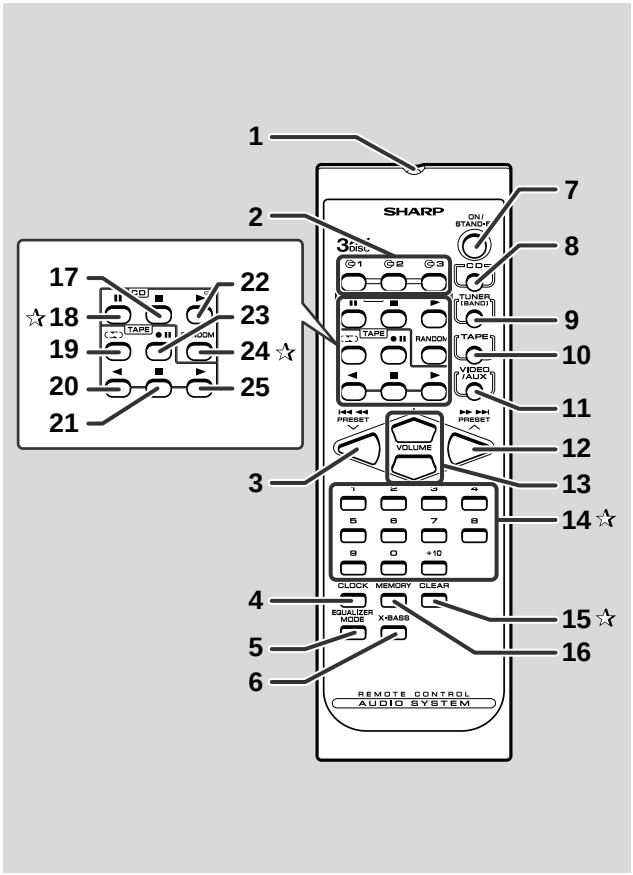
■ Rear panel

1. Cooling Fan
2. Subwoofer Pre-output Jack
3. AC Power Cord
4. FM/AM Loop Antenna Jack
5. Video/Auxiliary (Audio Signal) Input Jacks
6. Speaker Terminals

Note:
This product is equipped with a cooling fan inside, which begins to run at a specified volume level for better heat radiation.

■ Speaker system

1. Tweeter
2. Woofer
3. Bass Reflex Duct
4. Speaker Terminals



■ Remote control

1. Remote Control Transmitter
2. CD Direct Play Buttons
3. CD Track Down or Fast Reverse, Tape Fast Wind, Tuner Preset Down Button
4. Clock Button
5. Equalizer Mode Select Button
6. Extra Bass Button
7. Power On/Stand-by Button
8. CD Button
9. Tuner (Band) Button
10. Tape Button
11. Video/Auxiliary Button
12. CD Track Up or Fast Forward, Tape Fast Wind, Tuner Preset Up Button
13. Volume Up and Down Buttons
14. Disc Direct Search Buttons
15. Clear Button
16. CD Memory Button
17. CD Stop Button
18. CD Pause Button
19. Tape Reverse Mode Select Button
20. Tape Reverse Play Button
21. Tape Stop Button
22. CD Play or Repeat Button
23. Tape Record Pause Button
24. CD Random Button
25. Tape Forward Play Button

Buttons with "☆" mark in the illustration can be operated on the remote control only.

DISASSEMBLY

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take cassette tape and compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Top Cabinet	1. Screw ..... (A1) x5	5-1
2	Side Panel (Left/Right)	1. Screw ..... (B1) x10	5-1
3	Rear Panel	1. Screw ..... (C1) x7 2. Screw ..... (C2) x2 3. Flat Cable ..... (C3) x1	5-2
4	CD Changer Mechanism Unit	1. Hook ..... (D1) x2 2. Socket ..... (D2) x1 3. Flat Cable ..... (D3) x2	5-2
5	Front Panel	1. Screw ..... (E1) x3 2. Hook ..... (E2) x2 3. Socket ..... (E3) x2 4. Flat Cable ..... (E4) x1 5. Flat Wire ..... (E5) x1	5-2,5-3 5-3
6	Main PWB	1. Screw ..... (F1) x2 2. Socket ..... (F2) x2	5-2,6-1 6-1
7	Power PWB	1. Screw ..... (G1) x4	6-1
8	Display PWB	1. Knob ..... (H1) x1 2. Screw ..... (H2) x9 3. Flat Cable ..... (H3) x1	6-2
9	Tape Mechanism	1. Screw ..... (J1) x4	6-2
10	Headphones PWB	1. Screw ..... (K1) x1	6-2
11	CD Servo PWB (Note 1)	1. Screw ..... (L1) x3 2. Socket ..... (L2) x6	6-3
12	CD Changer Mechanism Unit	1. Screw ..... (M1) x4 2. Screw ..... (M2) x2 3. Top Board ..... (M3) x1 4. Stabilizer Holder ..... (M4) x1 5. Disk Tray ..... (M5) x3 6. Screw ..... (M6) x3 7. Guide,Mecha Holder .. (M7) x1 8. Screw ..... (M8) x1 9. Stopper ..... (M9) x1 10. Holder,Mecha ..... (M10) x1 11. Screw ..... (M11) x4	6-3 6-4

Note 1:

After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of the connector so as to protect the optical pickup from electro-static damage.

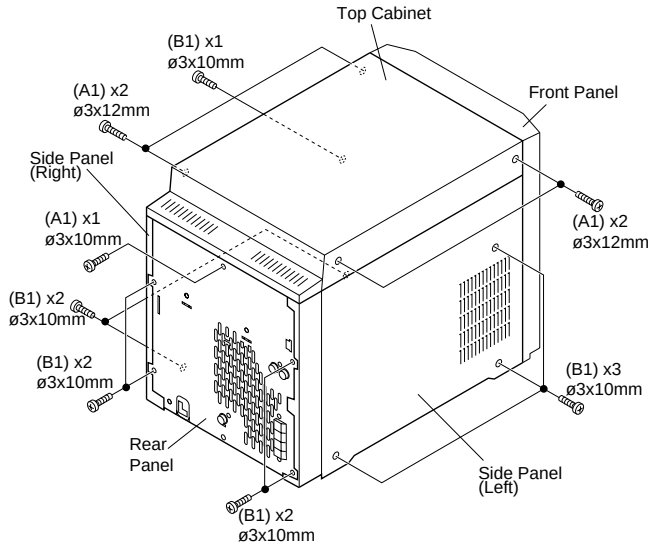


Figure 5-1

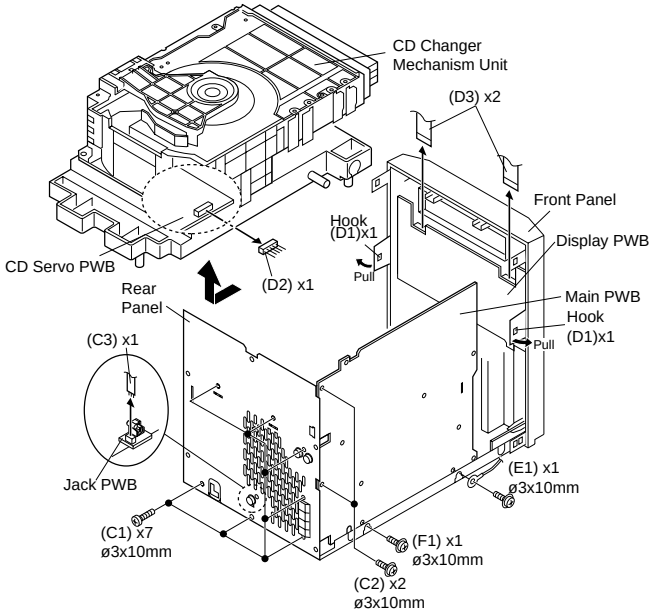


Figure 5-2

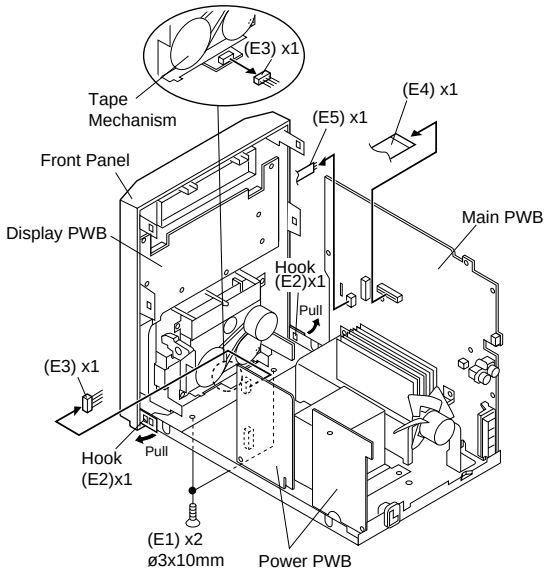


Figure 5-3

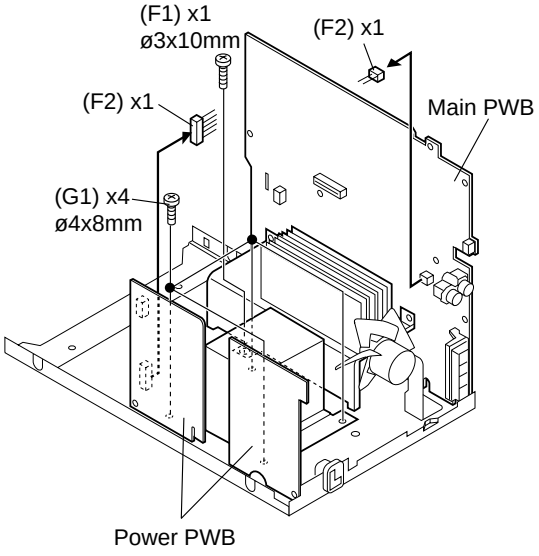


Figure 6-1

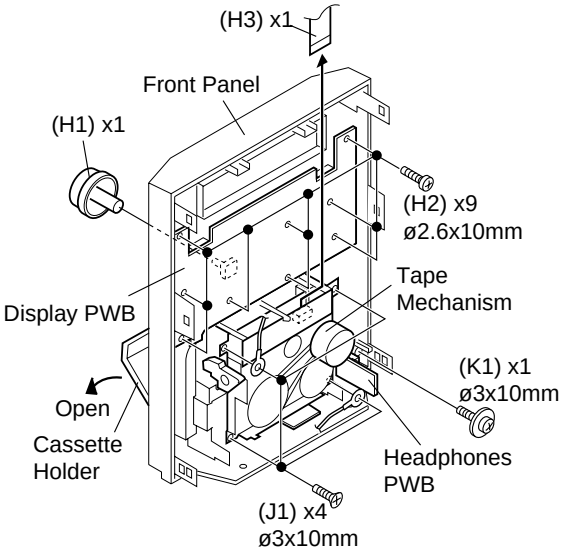


Figure 6-2

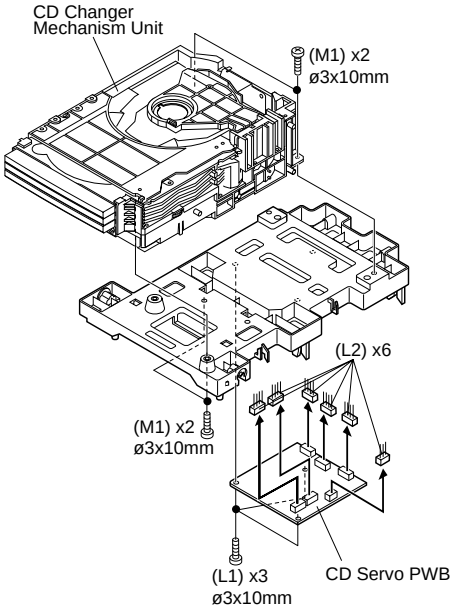


Figure 6-3

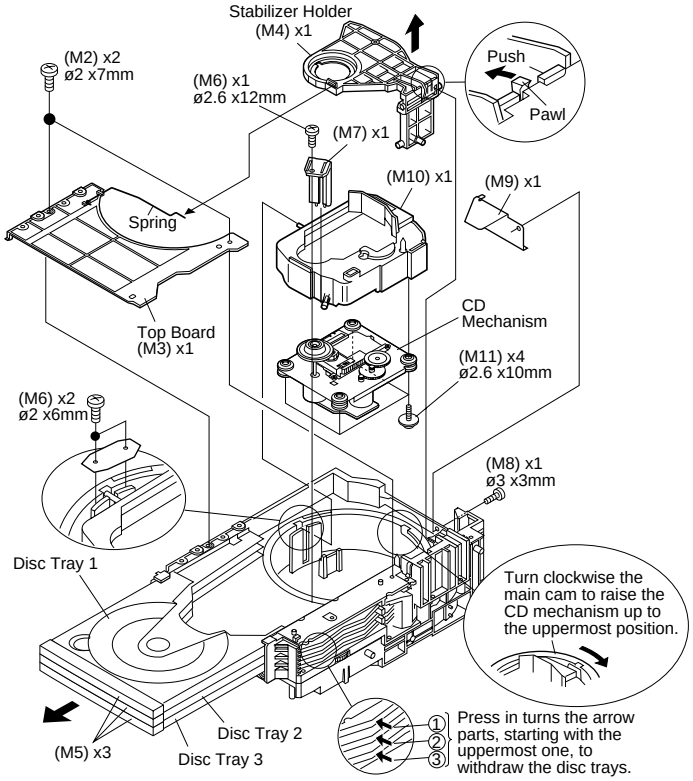


Figure 6-4

STEP	REMOVAL	PROCEDURE	FIGURE
1	Woofer	1. Net Frame ..... (A1) x1 2. Catching Holder ..... (A2) x4 3. Screw ..... (A3) x4 4. Screw ..... (A4) x4	6-5
2	Tweeter	1. Screw ..... (B1) x2	6-5

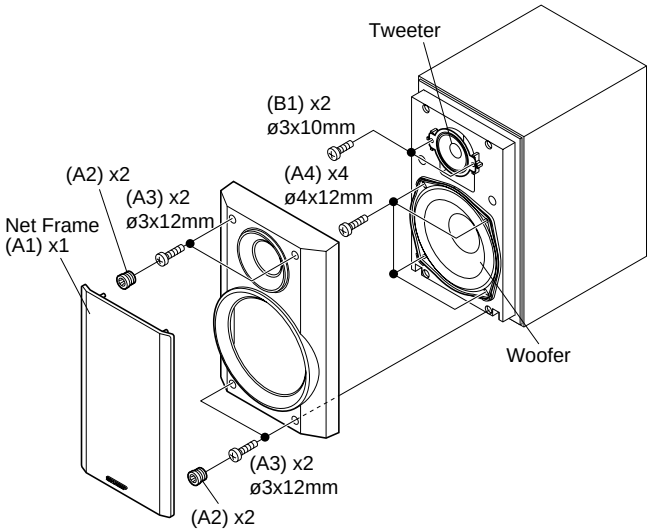


Figure 6-5

REMOVING AND REINSTALLING THE MAIN PARTS

TAPE MECHANISM SECTION

Perform steps 1 to 9 of the disassembly method to remove the tape mechanism.

How to remove the Record/Playback Head (See Fig. 7-1)

1. When you remove the screws (A1) x 2 pcs and (A2) x 1 pc., the record/playback head can be removed.

How to remove the Pinch Roller (See Fig. 7-2)

1. Carefully bend the pinch roller pawl in the direction of the arrow **<A>**, and remove the pinch roller (B1) x 1 pc., in the direction of the arrow **<B>**.

Note:
When installing the pinch roller, pay attention to the spring mounting position.

How to remove the Belt (See Fig. 7-3)

1. Remove the main belt (C1) x 1 pc., from the motor side.
2. Remove the FF/REW belt (C2) x 1 pc.

How to remove the Motor (See Fig. 7-4)

1. Remove the screws (D1) x 2 pcs., to remove the motor.

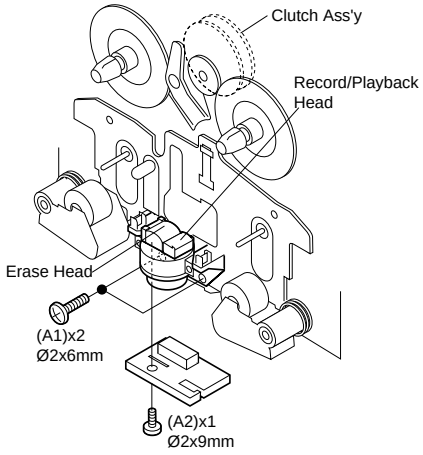


Figure 7-1

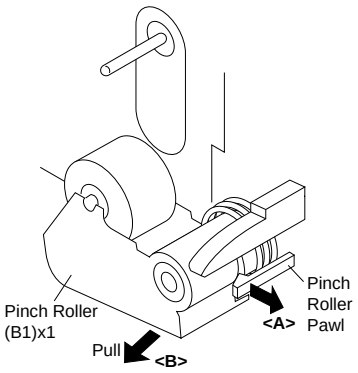


Figure 7-2

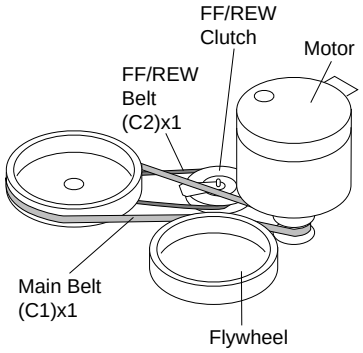


Figure 7-3

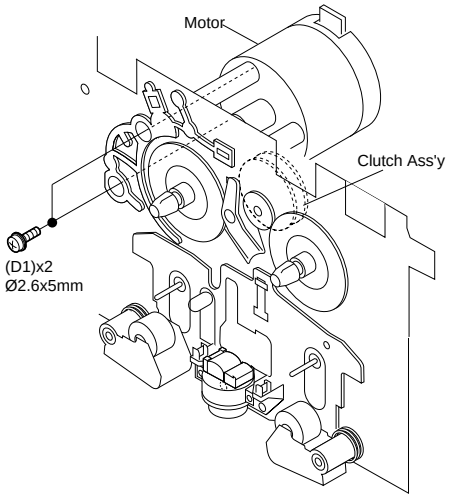


Figure 7-4

CD MECHANISM SECTION

Perform steps 1 to 4 and 11 to 12 of the disassembly method to remove the CD mechanism.

How to remove the Optical Pickup (See Fig. 8-1)

1. Remove the screws (A1) x 2 pcs and shaft (A2) x 1 pc.
2. Remove the stop washer (A3) x 1 pc and gear (A4) x 1 pc.
3. Remove the optical pickup.

Note:
After pulling out the optical pickup connector, wrap the tip of it with conductive aluminium foil or the like to protect the optical pickup from the static electricity.

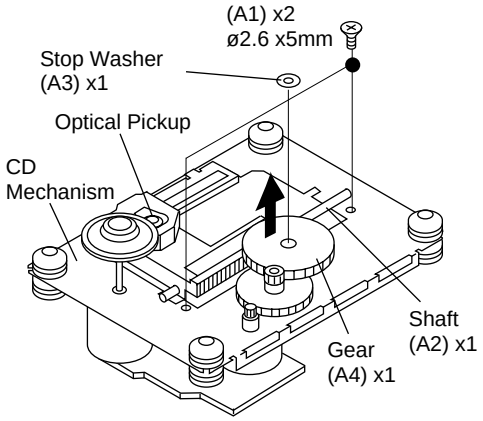


Figure 8-1

How to remove the Tray Motor and the Main Cam Motor (See Fig. 8-2)

1. Remove the CD changer mechanism unit by the method described in page 7, and disassemble as shown in the figure.
2. Remove the belt (B1) x 2 pcs from the motor side.
3. Remove the screws (B2) x 4 pcs.
4. Remove the tray motor and the main cam motor.

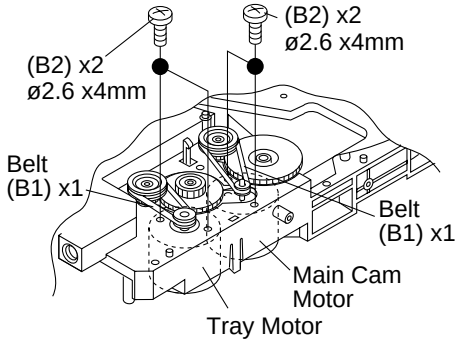
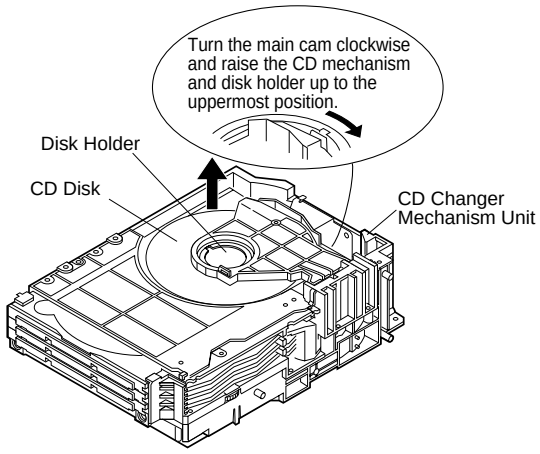


Figure 8-2

How to remove the CD Disc (When CD is in the playback state) (See Fig. 8-3)

1. Remove the cabinet and front panel.
2. Disassemble as shown in the figure so that the CD disc of CD changer becomes visible.
3. Remove the CD disc as shown in the figure.


Turn the main cam clockwise and raise the CD mechanism and disk holder up to the uppermost position.
Disk Holder
CD Disk
CD Changer
Mechanism Unit

(When CD is in playback state)

Figure 8-3

How to remove the CD Disc (When CD exists in the tray) (See Fig. 8-4)

1. Remove the cabinet and front panel.
2. Disassemble as shown in the figure so that the CD disc of CD changer can be taken out.
3. Remove the CD disc from the tray as shown in the figure.

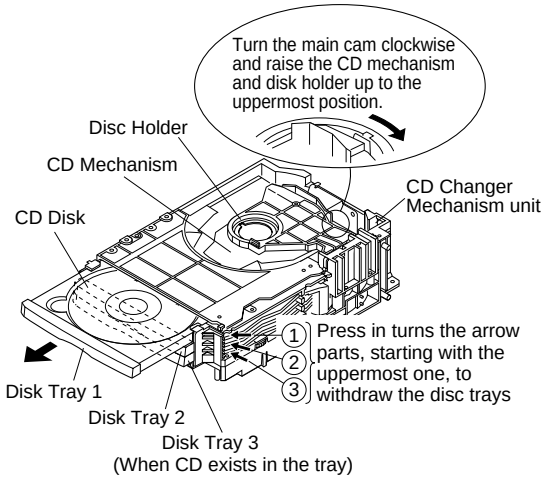

Turn the main cam clockwise and raise the CD mechanism and disk holder up to the uppermost position.
Disc Holder
CD Mechanism
CD Changer
Mechanism unit
CD Disk
① Press in turns the arrow
② parts, starting with the
③ uppermost one, to
withdraw the disc trays
Disk Tray 1
Disk Tray 2
Disk Tray 3
(When CD exists in the tray)

Figure 8-4

ADJUSTMENT

MECHANISM SECTION

• Driving Force Check

Torque Meter	Specified Value
Play: TW-2111	Over 80 g

• Torque Check

Torque Meter	Specified Value
Play: TW-2111	30 to 80 g.cm
Fast forward: TW-2231	70 to 180 g.cm
Rewind: TW-2231	70 to 180 g.cm

TUNER SECTION

fL: Low-range frequency
fH: High-range frequency

• AM IF/RF

Signal generator: 400 Hz, 30%, AM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
AM IF	450 kHz	1,602 kHz	T351	*1
AM Band Coverage	—	531 kHz	(fL): T306 1.1 ± 0.1 V	*2
AM Tracking	990 kHz	990 kHz	(fL): T303	*1

*1. Input: Antenna Output: TP302
*2. Input: Antenna Output: TP301

• FM RF

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Point	Instrument Connection
FM Band Coverage	—	87.50 MHz	T301 (fL): 1.3 V ± 0.1 V	*1
FM RF	98.00 MHz (10-30 dB)	98.00 MHz	L312	*2

*1. Input: Antenna Output: TP301
*2. Input: Antenna Output: Speaker terminal

• FM IF

Signal generator: 10.7 MHz, FM modulated

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Point	Instrument Connection
IF	10.7 MHz	98 MHz	T302 (Turn the core of transformer T302 fully counter-clock wise)	*1

*1. Input: Antenna Output: TP301

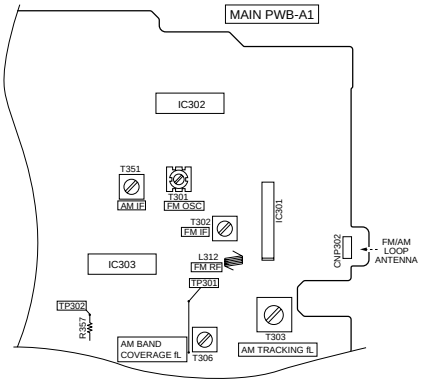


Figure 9-2 ADJUSTMENT POINTS

• Tape Speed

	Test Tape	Adjusting Point	Specified Value	Instrument Connection
Normal speed	MTT-111	Variable Resistor in motor.	3,000 ± 30 Hz	Speaker Terminal (Load resistance: 6 ohms)

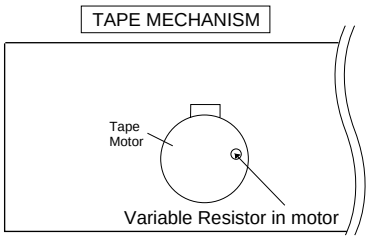


Figure 9-1

CD SECTION

• Adjustment

Since this CD system incorporates the following automatic adjustment functions, readjustment is not needed when replacing the pickup. Therefore, different PWBs and pickups can be combined freely.

Each time a disc is changed, these adjustments are performed automatically. Therefore, playback of each disc can be performed under optimum conditions.

Items adjusted automatically

(1) Offset adjustment (The offset voltage between the head amplifier output and the VREF reference voltage is compensated inside the IC.)
  * Focus offset adjustment
  * Tracking offset adjustment

(2) Tracking balance adjustment

(3) Gain adjustment (The gain is compensated inside the IC so that the loop gain at the gain crossover frequency will be 0 dB.)
  * Focus gain adjustment
  * Tracking gain adjustment

CD ERROR CODE DESCRIPTION

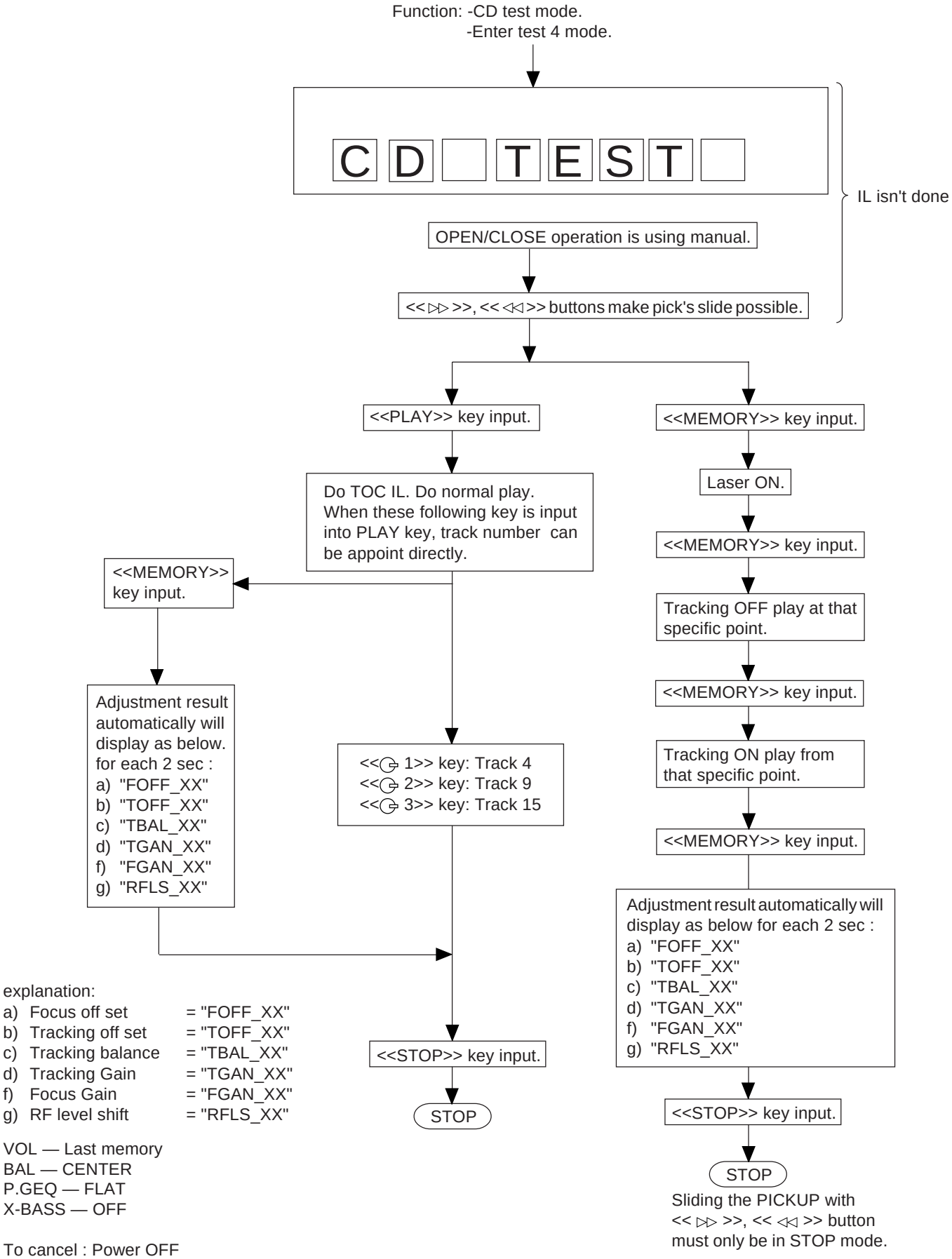
Error	Explanation
01	When Pickup set inner position, inner switch cannot detect 'ON' level for 10 secs.
10*	CAM error. Can't detect CAM switch when CAM is moving.
11*	When it detect CAM operation error during initialize process.
20*	TRAY error. Can't detect TRAY switch when TRAY is moving.
21*	When it detect TRAY operation error during initialize process.
22*	When it detect invalid TRAY switch during normal operation.
23*	When it detect invalid TRAY switch during initialize procecss.
31	When it change to CD function, DSP cannot read initial data.

* 'CHECKING'
If Error is detected, 'CHECKING' will be displayed instead of 'ER-CD**'. 'ER-CD**' display will only be displayed when error had been detected for the 5th times.

TEST MODE

• Setting the test mode

Any one of test mode can be set by pressing several keys as follows.
<X-BASS> + <CD> + <ON/STAND-BY> TEST: CD operation test.


Function: -CD test mode.
-Enter test 4 mode.
C D T E S T
IL isn't done
OPEN/CLOSE operation is using manual.
<< ▷▷ >>, << ◁◁ >> buttons make pick's slide possible.
<<PLAY>> key input.
<<MEMORY>> key input.
Do TOC IL. Do normal play.
When these following key is input into PLAY key, track number can be appoint directly.
Laser ON.
<<MEMORY>> key input.
<<MEMORY>> key input.
Tracking OFF play at that specific point.
<<MEMORY>> key input.
Adjustment result automatically will display as below. for each 2 sec :
a) "FOFF_XX"
b) "TOFF_XX"
c) "TBAL_XX"
d) "TGAN_XX"
f) "FGAN_XX"
g) "RFLS_XX"
<<1>> key: Track 4
<<2>> key: Track 9
<<3>> key: Track 15
Tracking ON play from that specific point.
<<MEMORY>> key input.
Adjustment result automatically will display as below for each 2 sec :
a) "FOFF_XX"
b) "TOFF_XX"
c) "TBAL_XX"
d) "TGAN_XX"
f) "FGAN_XX"
g) "RFLS_XX"
<<STOP>> key input.
STOP
<<STOP>> key input.
STOP
Sliding the PICKUP with << ▷▷ >>, << ◁◁ >> button must only be in STOP mode.

explanation:

a)	Focus off set	= "FOFF_XX"
b)	Tracking off set	= "TOFF_XX"
c)	Tracking balance	= "TBAL_XX"
d)	Tracking Gain	= "TGAN_XX"
f)	Focus Gain	= "FGAN_XX"
g)	RF level shift	= "RFLS_XX"

VOL — Last memory
BAL — CENTER
P.GEQ — FLAT
X-BASS — OFF

To cancel : Power OFF

Standard Specification of Stereo System Error Message Display Contents

Error Contents		DISPLAY	Notes
CD	Pickup Mechanism Error.	'ER-CD01'	PU-IN SW Detection NG.
	CD Changer Mechanism Error.	'ER-CD**' (*)	10: CAM SW Detection NG during normal operation. 11: CAM SW Detection NG during initialize process. 20: TRAY SW Detection NG during normal operation. 21: TRAY SW Detection NG during initialize process. 22: Invalid TRAY SW value during normal operation. 23: Invalid TRAY SW value during initialize process.
	CD DSP Communication Error	'ER-CD31'	DSP COMMUNICATION ERROR
	Focus Not Match/ IL Time Over.	'NO DISC'	
TUNER	PLL Unlock.	FM 87.50 MHz	PLL Unlock.

(*) CHECKING:
If error is detected, 'CHECKING' will be displayed instead of 'ER-CD**' .
'ER-CD**' display will only be displayed when error had been detected for the 5th times.

Speaker abnormal detection and +B PROTECTION display
In case speaker abnormal detection or +B PROTECTION had occurred, it can be check by pressing 'POWER', 'VIDEO' and 'X-BASS' key twice. Display will show "S** B**". S is referring to speaker abnormal detection and B is referring to +B PROTECTION. ** is in hex valve.

+B PROTECTION is condition when irregular process occur on power supply line.

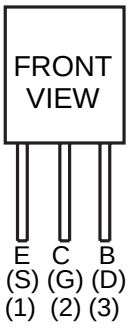
NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with “Fusible” is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means pico-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression “capacitance/withstand voltage” is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
  (P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
  1. In the tuner section,
     indicates AM
     indicates FM stereo
  2. In the main section, a tape is being played back.
  3. In the deck section, a tape is being played back.
  4. In the power section, a tape is being played back.
  5. In the CD section, the CD is stopped.
- Parts marked with “ ⚠ ” (⊏ 二 二 二 ⊐) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

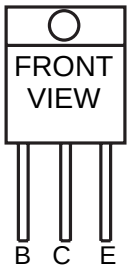
REF. NO	DESCRIPTION	POSITION
SW4	PICKUP IN	ON—OFF
SW701	POWER ON/STAND-BY	ON—OFF
SW702	CLOCK	ON—OFF
SW703	TIMER/SLEEP	ON—OFF
SW704	TUNING/TIME UP	ON—OFF
SW705	TUNING/TIME DOWN	ON—OFF
SW706	REC/PAUSE	ON—OFF
SW707	REVERSE MODE	ON—OFF
SW708	MEMORY/SET	ON—OFF
SW712	PRESET UP	ON—OFF
SW713	PRESET DOWN	ON—OFF
SW714	PLAY	ON—OFF
SW715	STOP	ON—OFF
SW716	REVERSE PLAY	ON—OFF
SW717	CD	ON—OFF
SW718	TUNER (BAND)	ON—OFF
SW719	TAPE	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW720	VIDEO/AUX	ON—OFF
SW721	DISC 3 EJECT	ON—OFF
SW722	DISC 2 EJECT	ON—OFF
SW723	DISC 1 EJECT	ON—OFF
SW724	DISC 1	ON—OFF
SW725	DISC 2	ON—OFF
SW726	DISC 3	ON—OFF
SW727	EQUALIZER	ON—OFF
SW728	X-BASS/DEMO	ON—OFF
SWB101	CAM 1	ON—OFF
SWB102	CAM 2	ON—OFF
SWB103	CAM 3	ON—OFF
SWB104	CAM 4	ON—OFF
SWB105	CD EJECT	ON—OFF
SWB106	CD TRAY CLOSE	ON—OFF
SWB107	CD IN	ON—OFF
SWB108	CD SET	ON—OFF

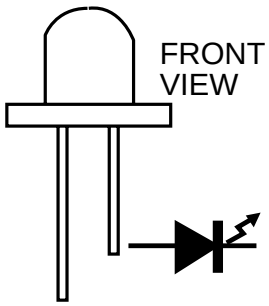
TYPES OF TRANSISTOR AND LED



KRC102 M
KRC104 M
KTA1266 GR
KTA1271 Y
KTA1273 Y
KTA1274 Y
KTC3199 GR
KTC3194 Y
KTC3203 Y
2SC1845 F



KTC2026



SLR342VC

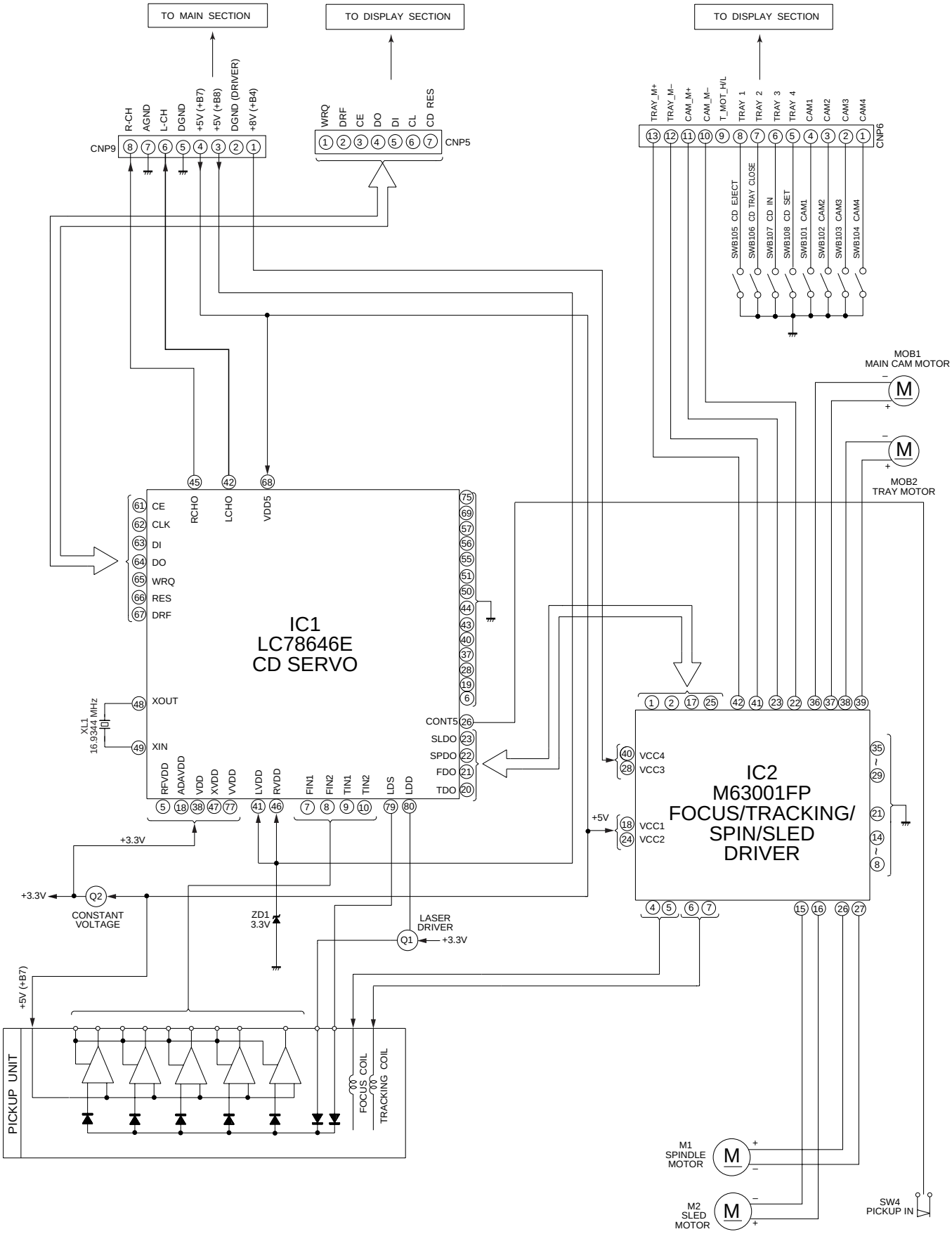


Figure 13 BLOCK DIAGRAM (1/3)

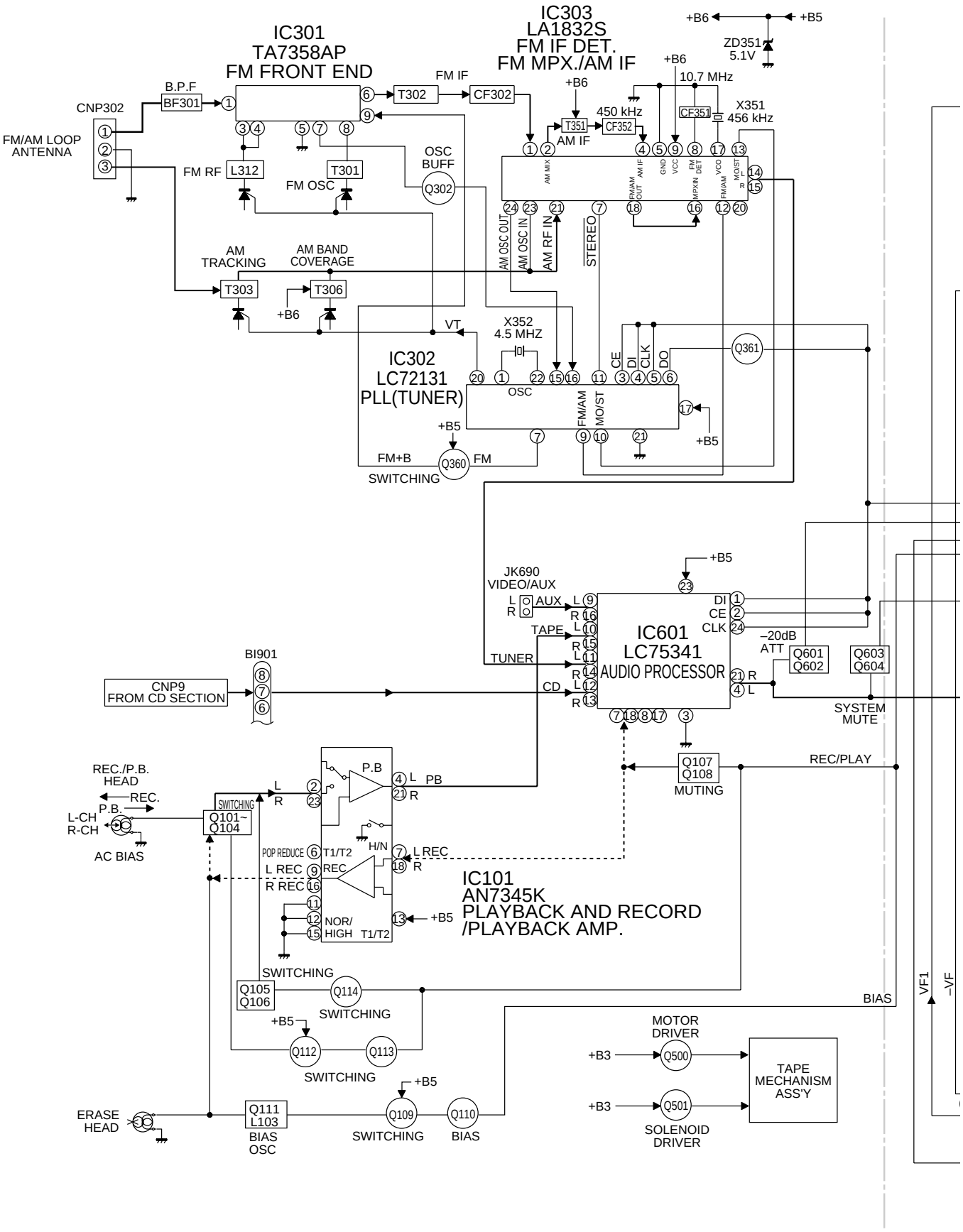


Figure 14 BLOCK DIAGRAM (2/3)

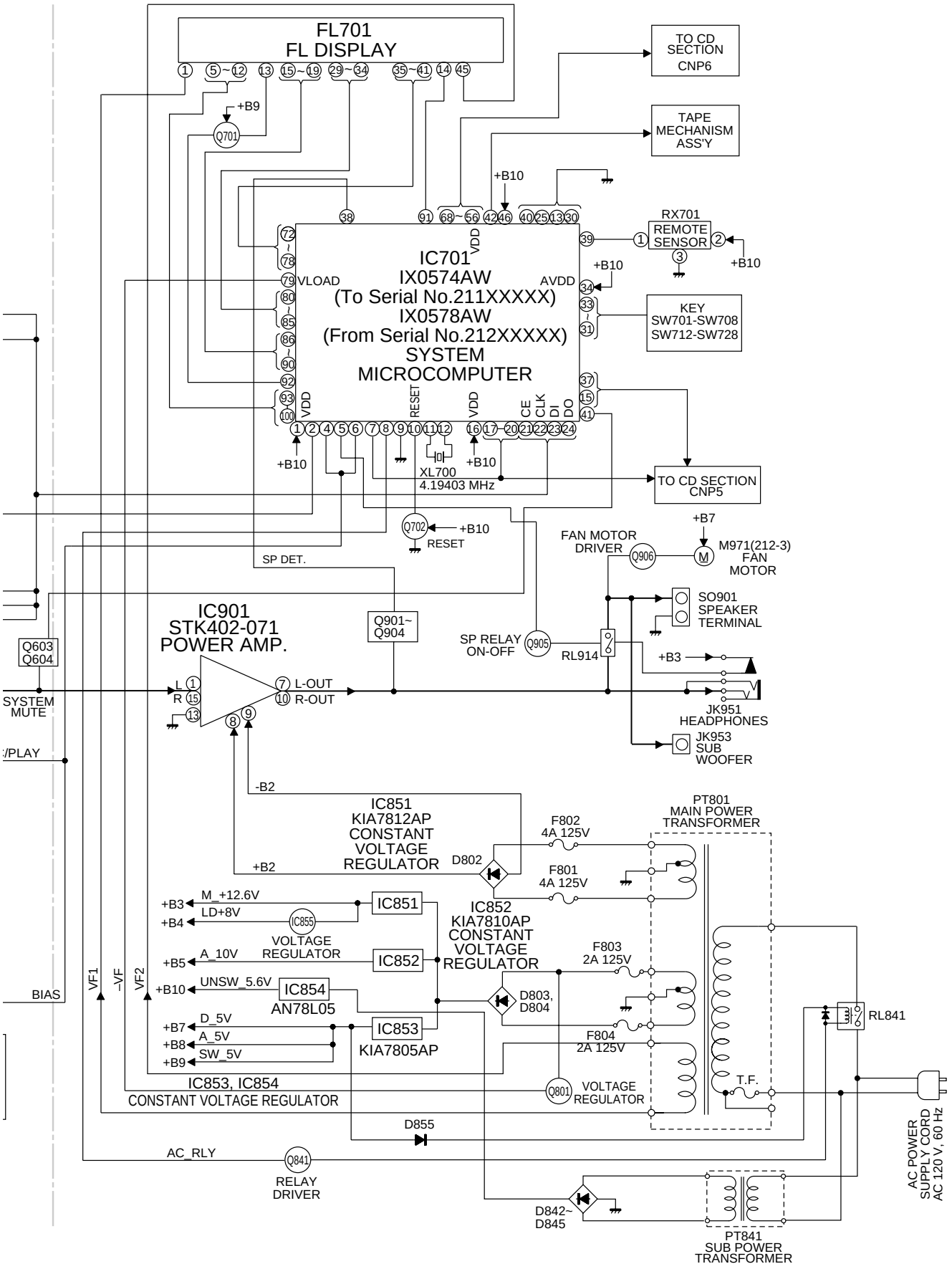
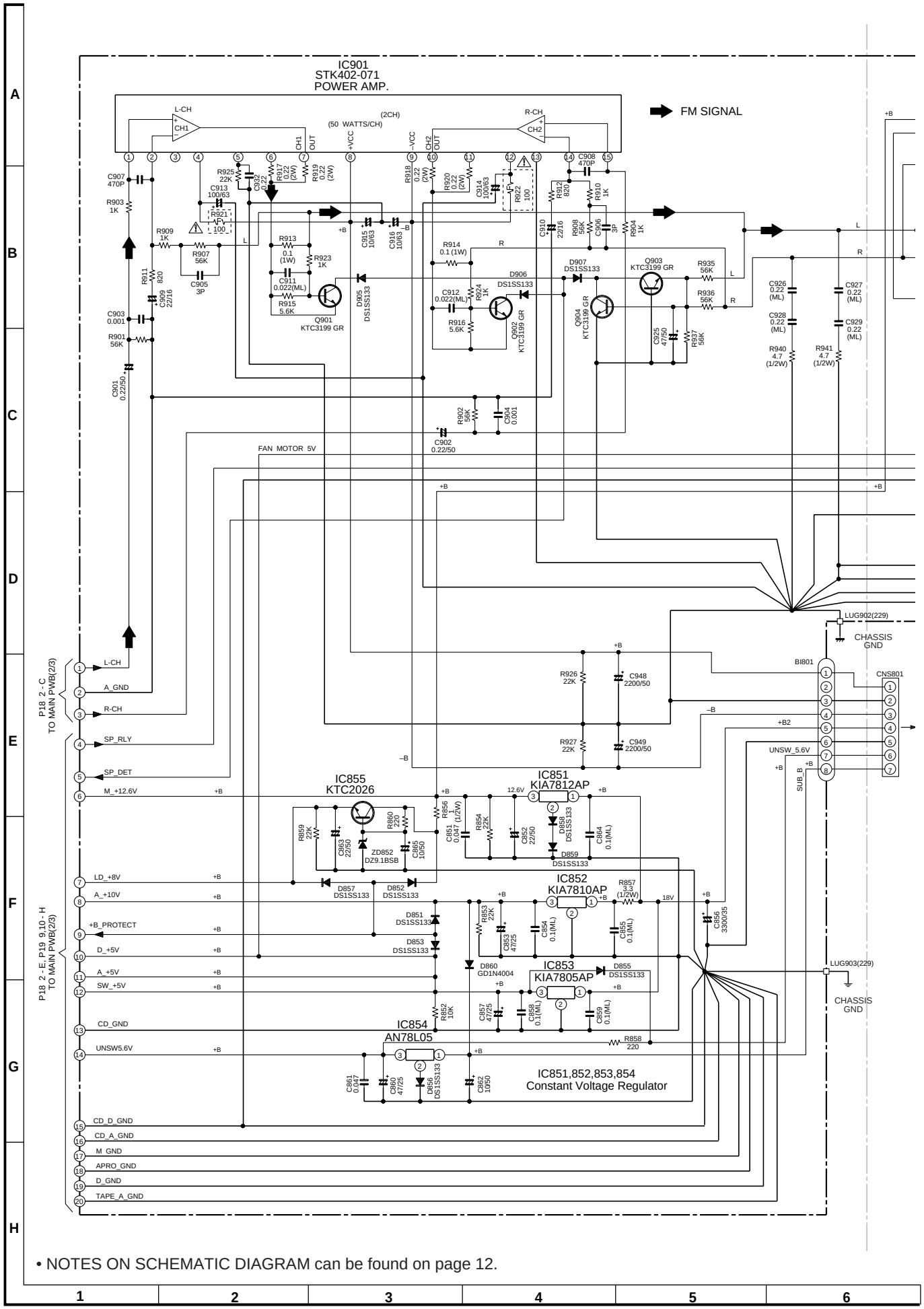
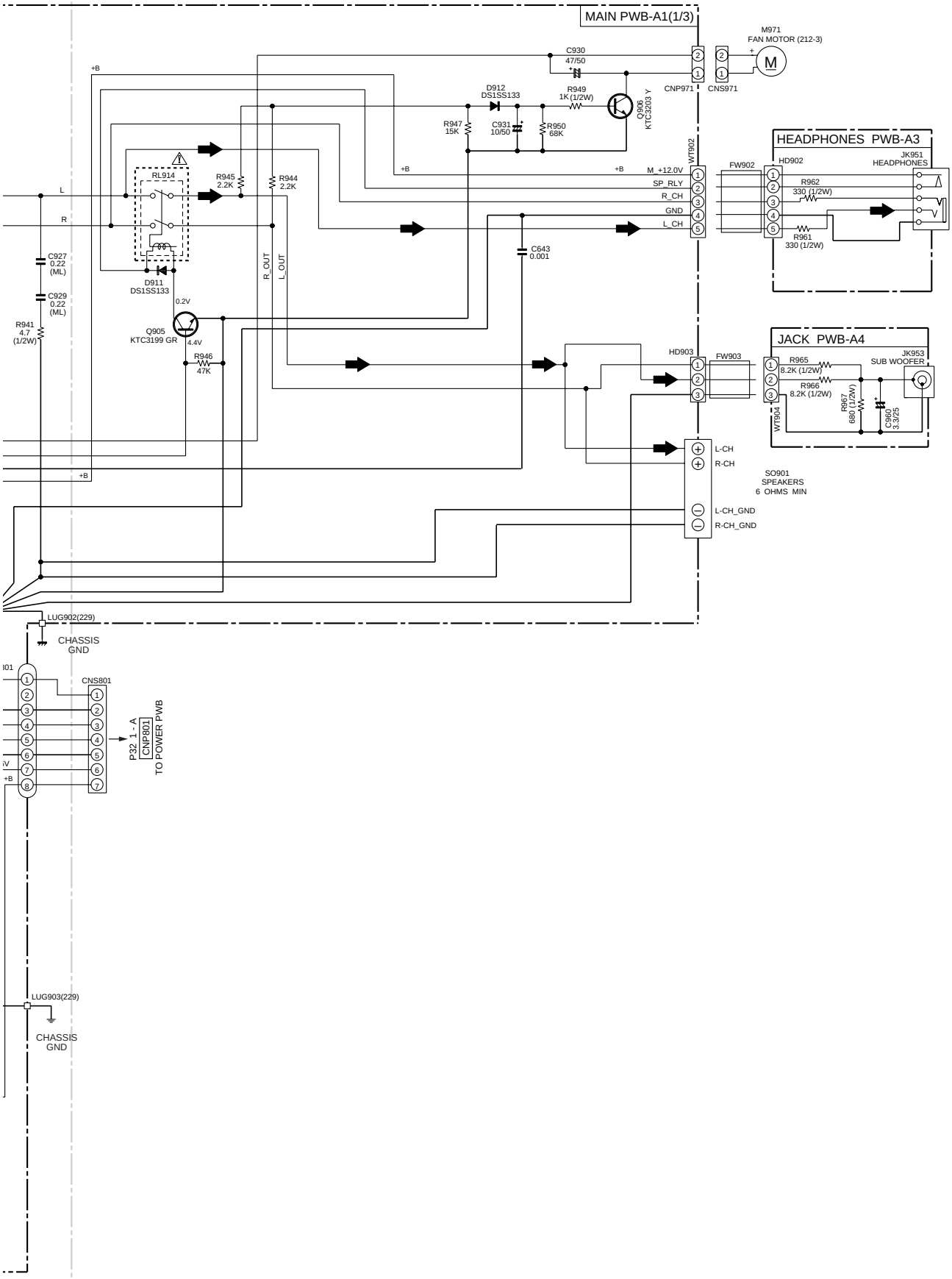


Figure 15 BLOCK DIAGRAM (3/3)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 12.

Figure 16 SCHEMATIC DIAGRAM (1/11)



7	8	9	10	11	12

Figure 17 SCHEMATIC DIAGRAM (2/11)

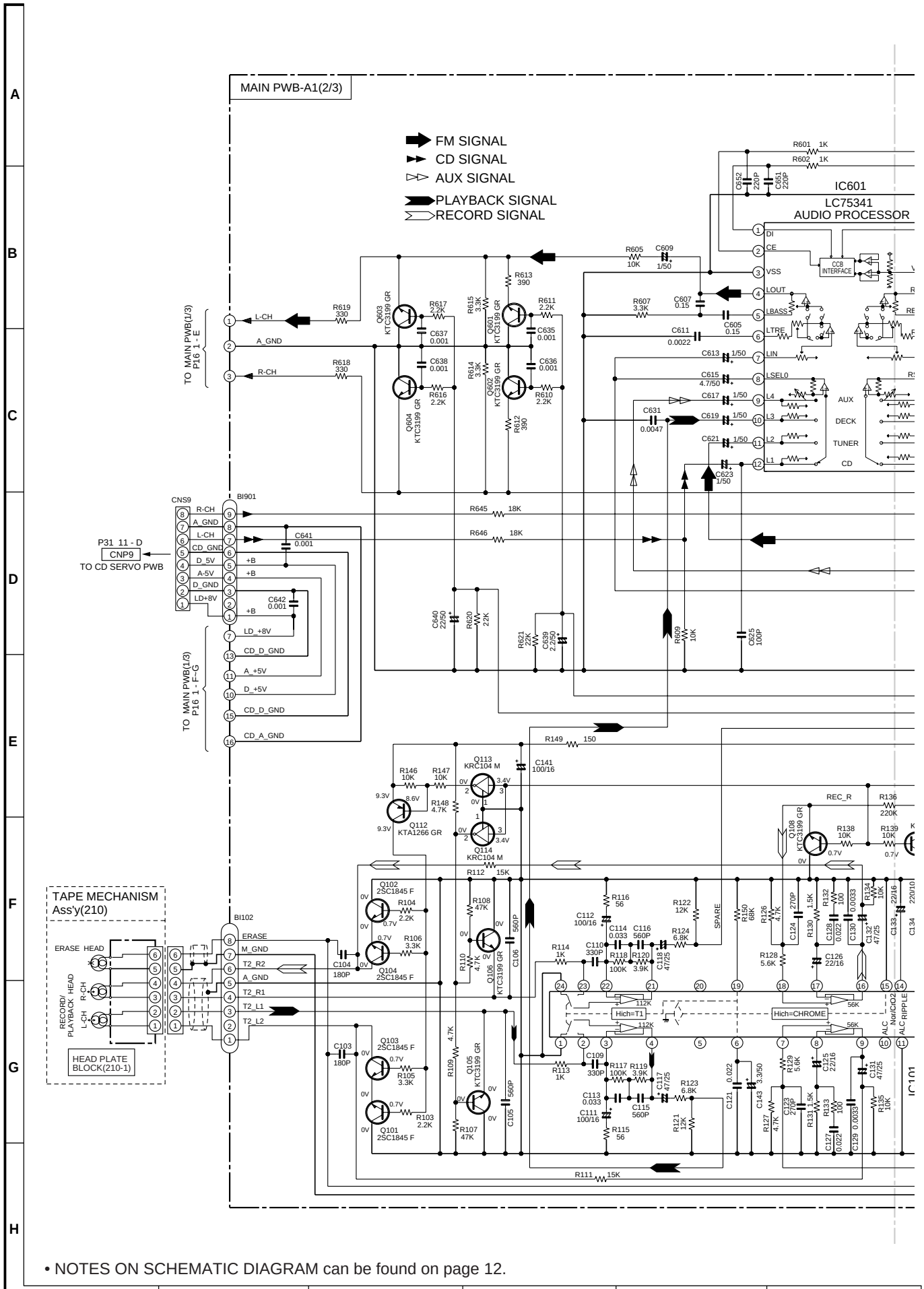
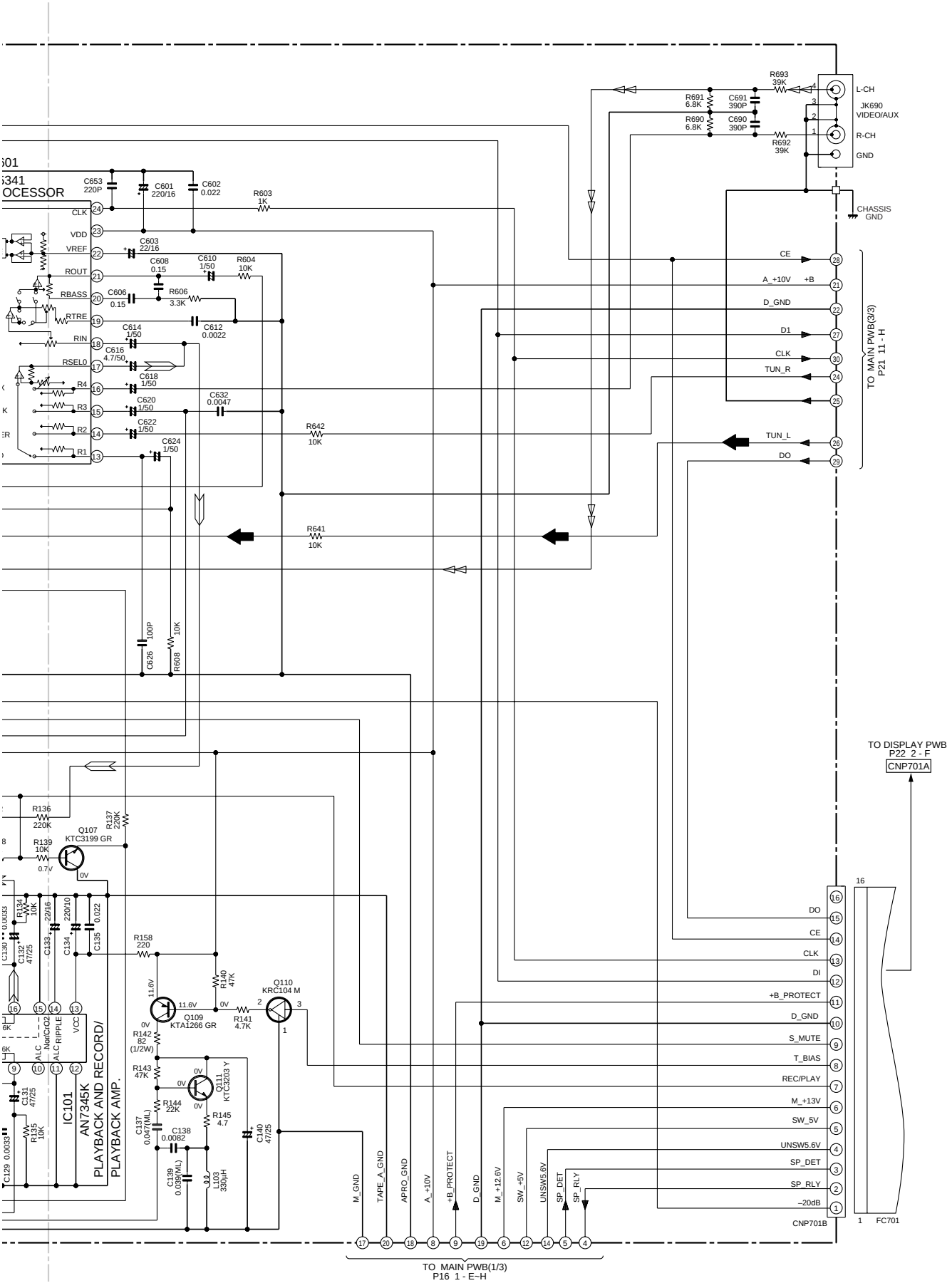
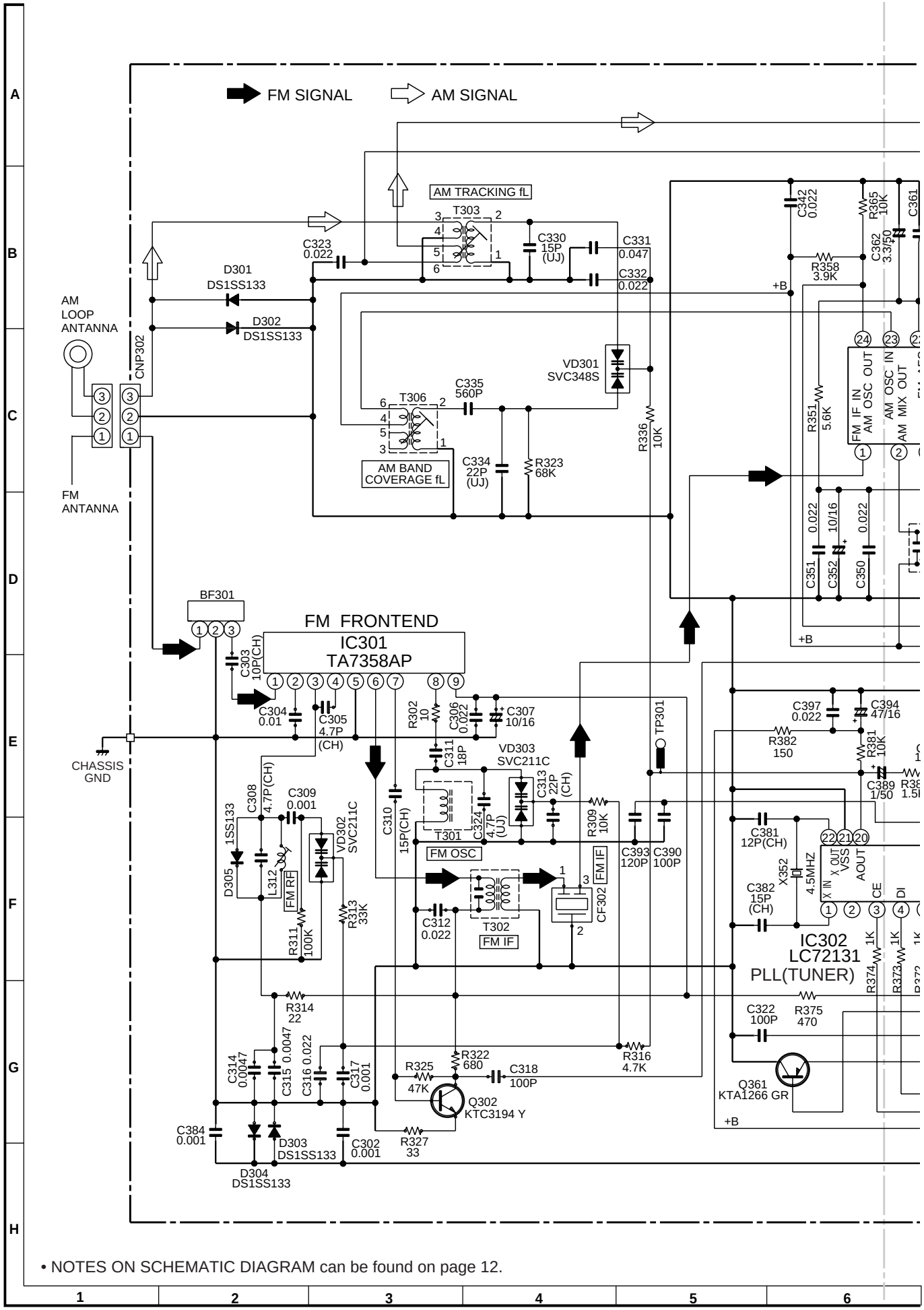


Figure 18 SCHEMATIC DIAGRAM (3/11)



7	8	9	10	11	12

Figure 19 SCHEMATIC DIAGRAM (4/11)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 12.

Figure 20 SCHEMATIC DIAGRAM (5/11)

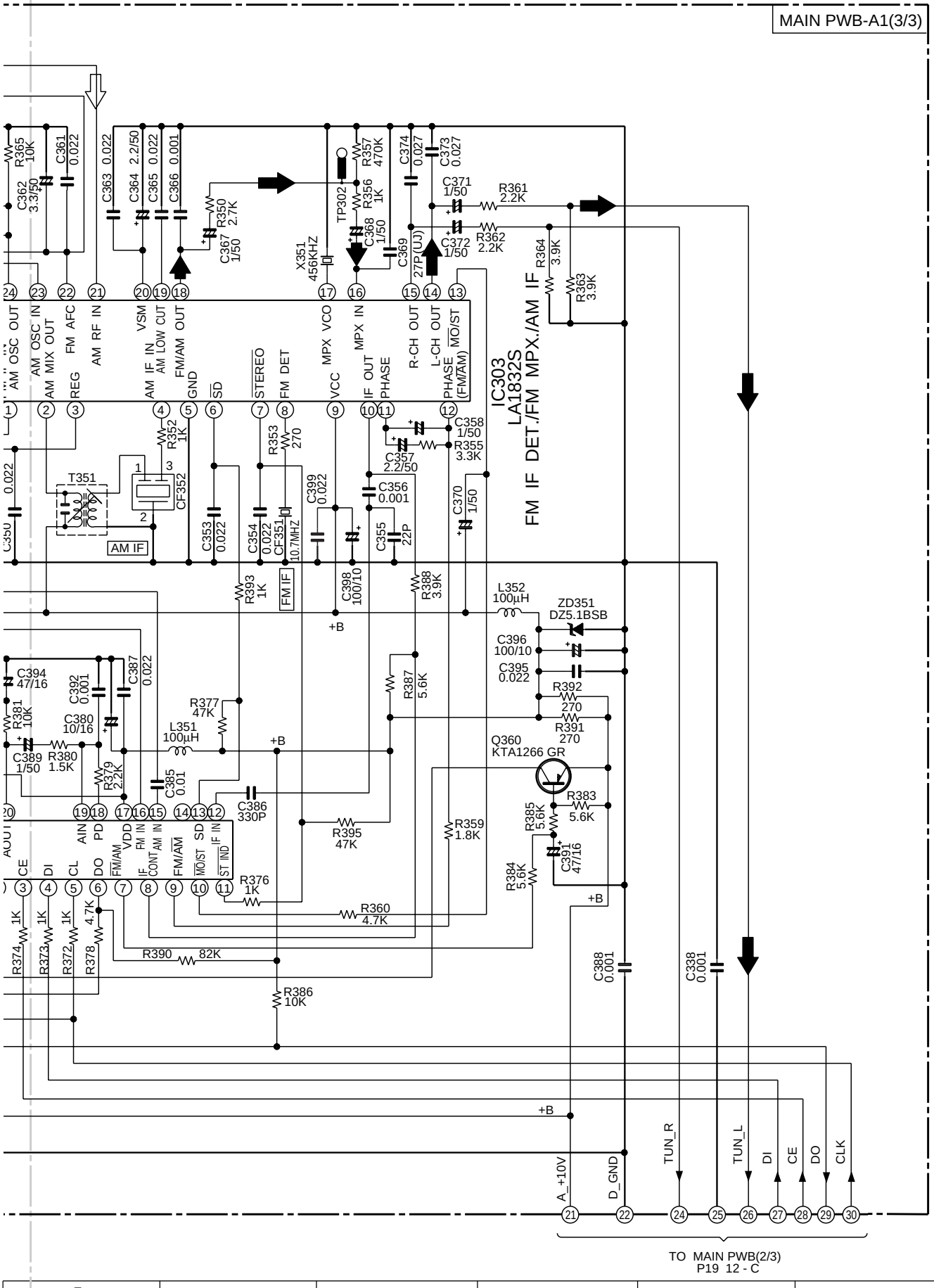
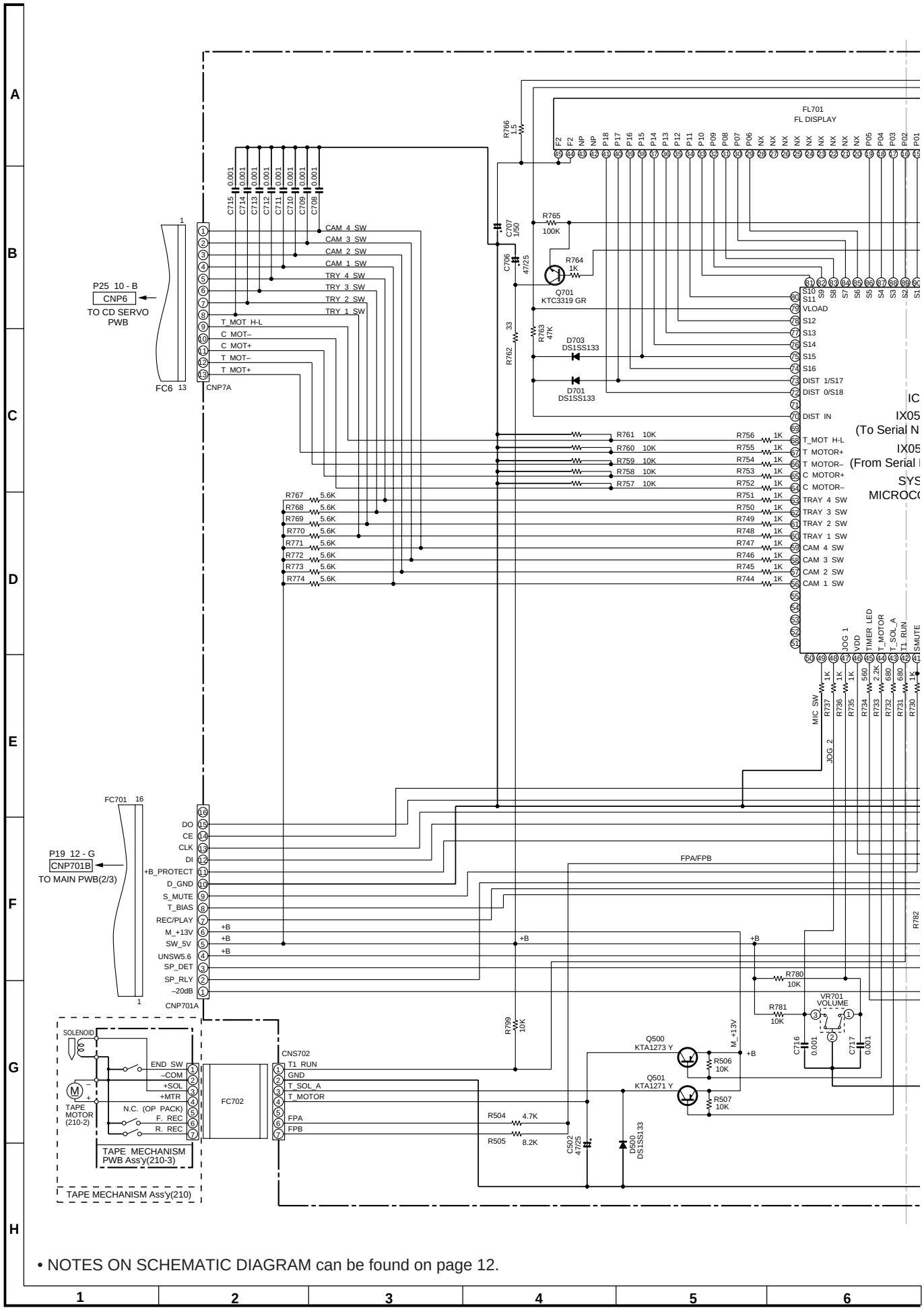
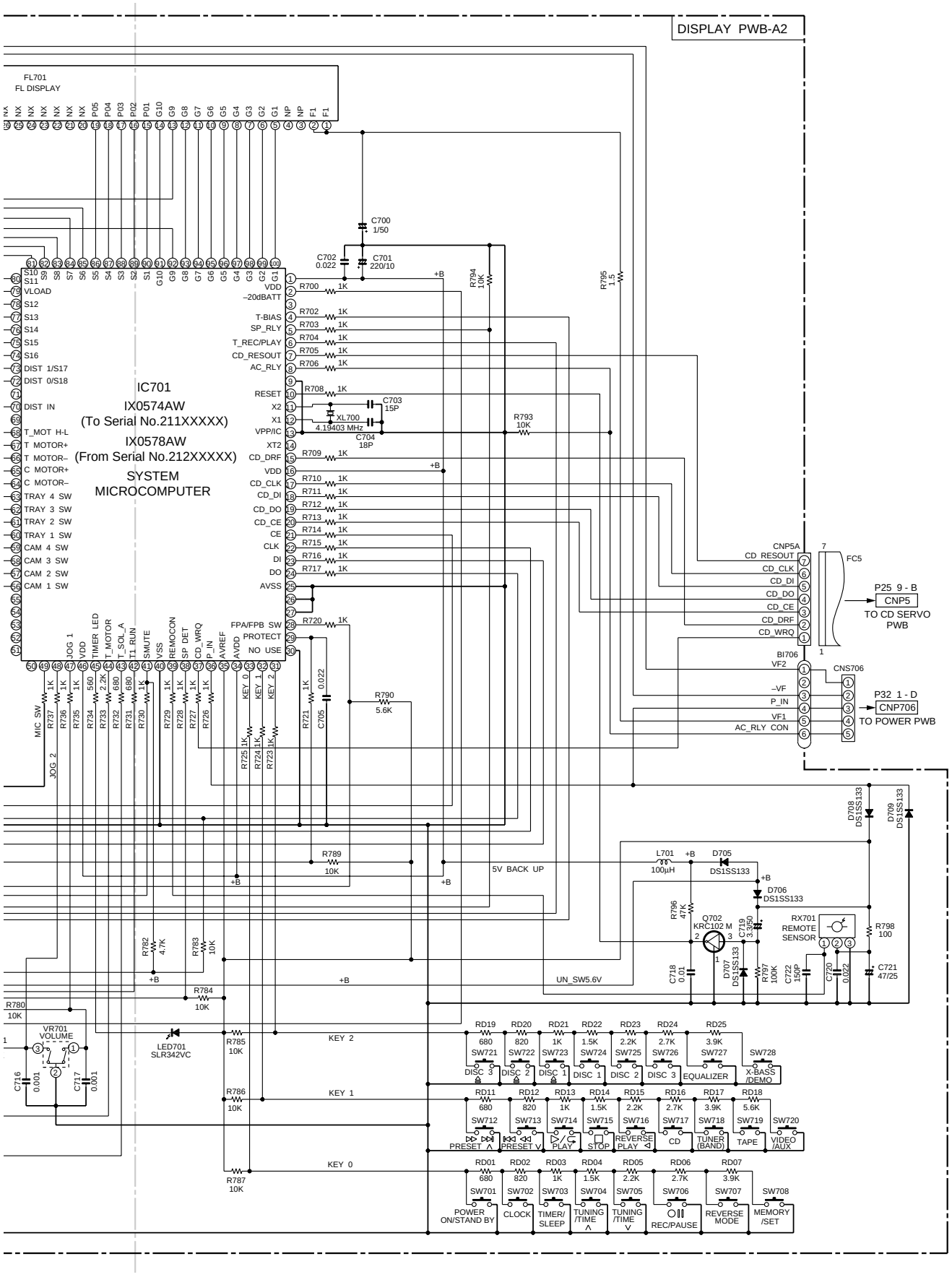


Figure 21 SCHEMATIC DIAGRAM (6/11)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 12.

Figure 22 SCHEMATIC DIAGRAM (7/11)



7	8	9	10	11	12

Figure 23 SCHEMATIC DIAGRAM (8/11)

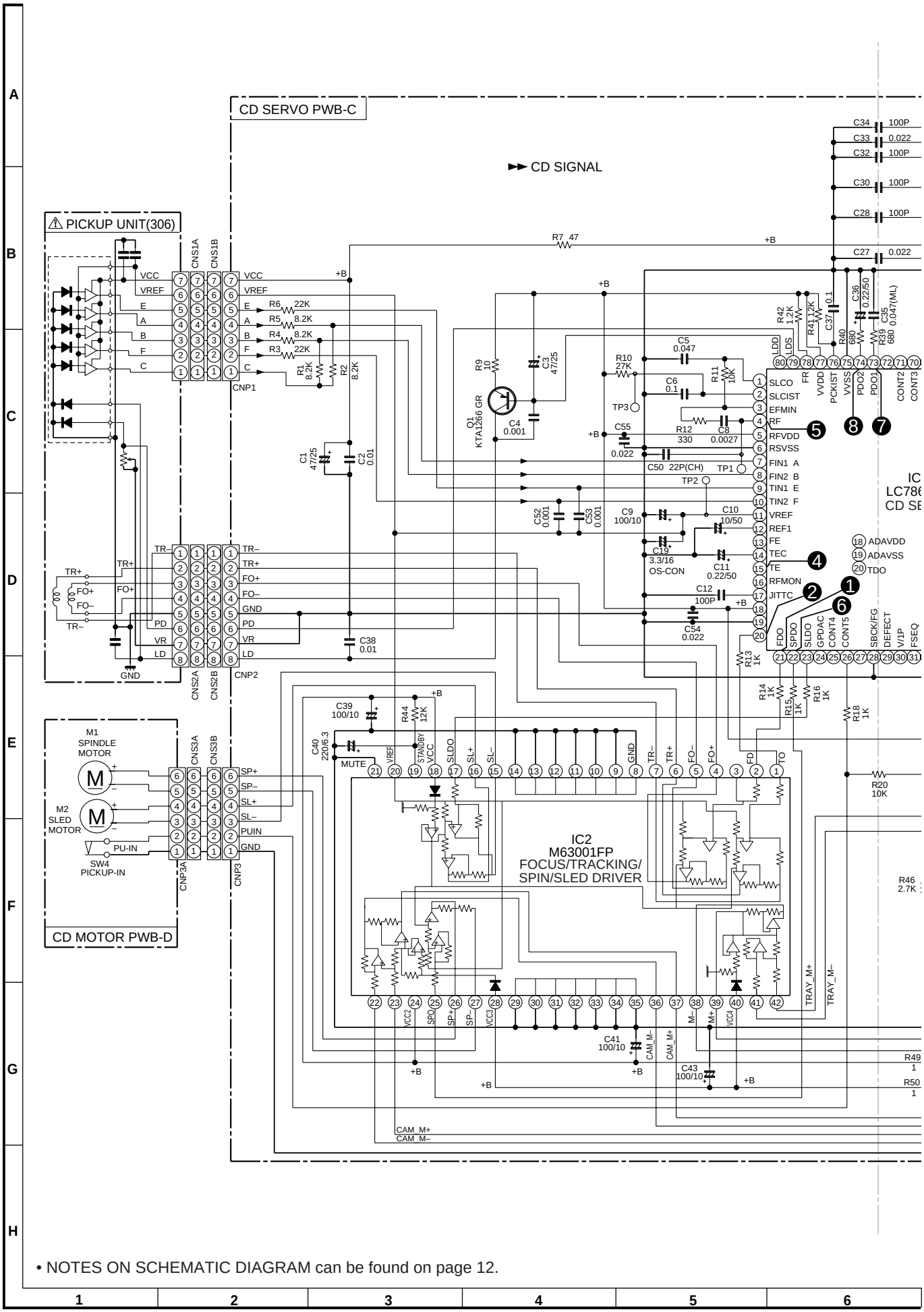
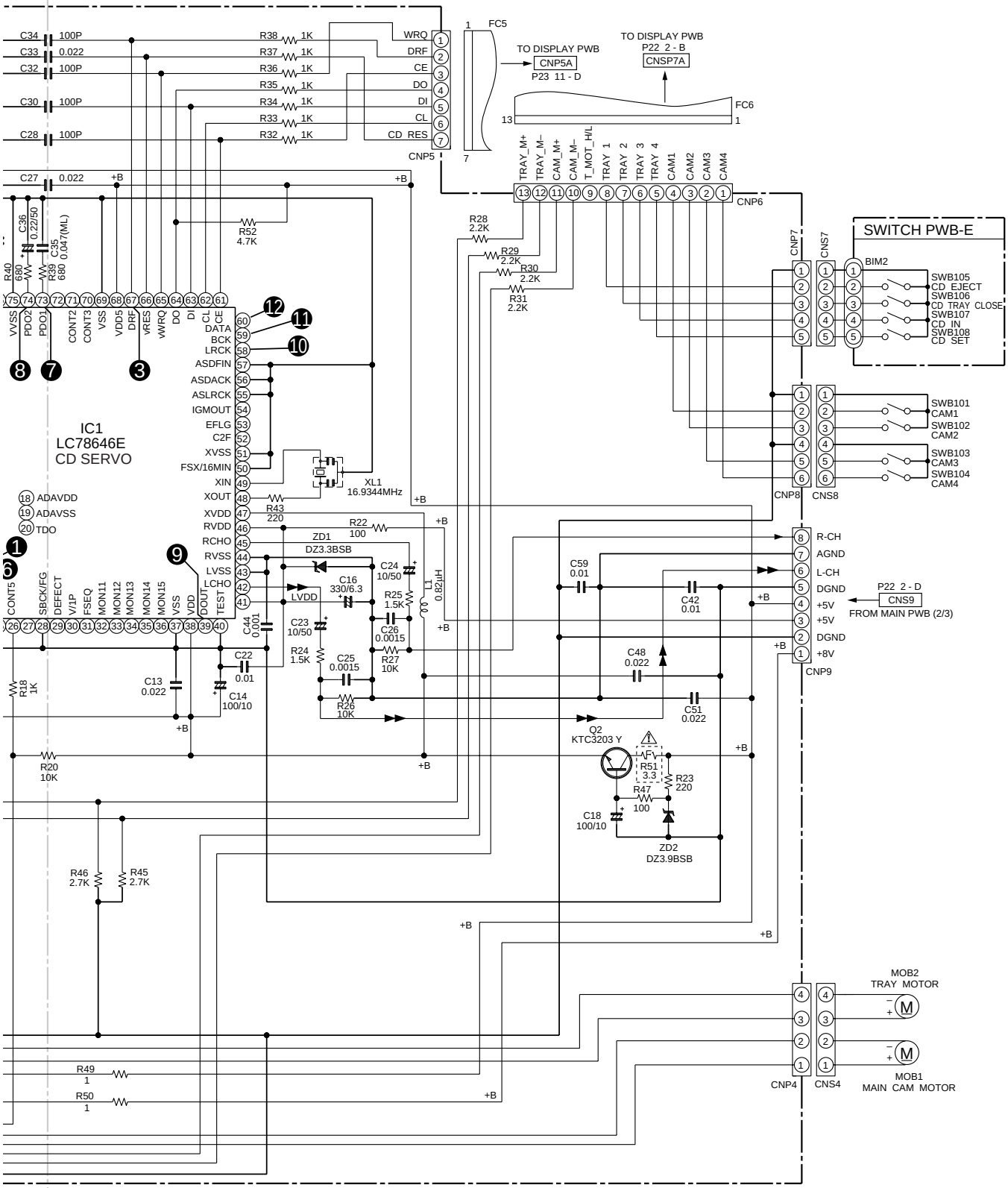


Figure 24 SCHEMATIC DIAGRAM (9/11)



• The numbers ❶ to ⓬ are waveform numbers shown in page 34.

7	8	9	10	11	12

Figure 25 SCHEMATIC DIAGRAM (10/11)

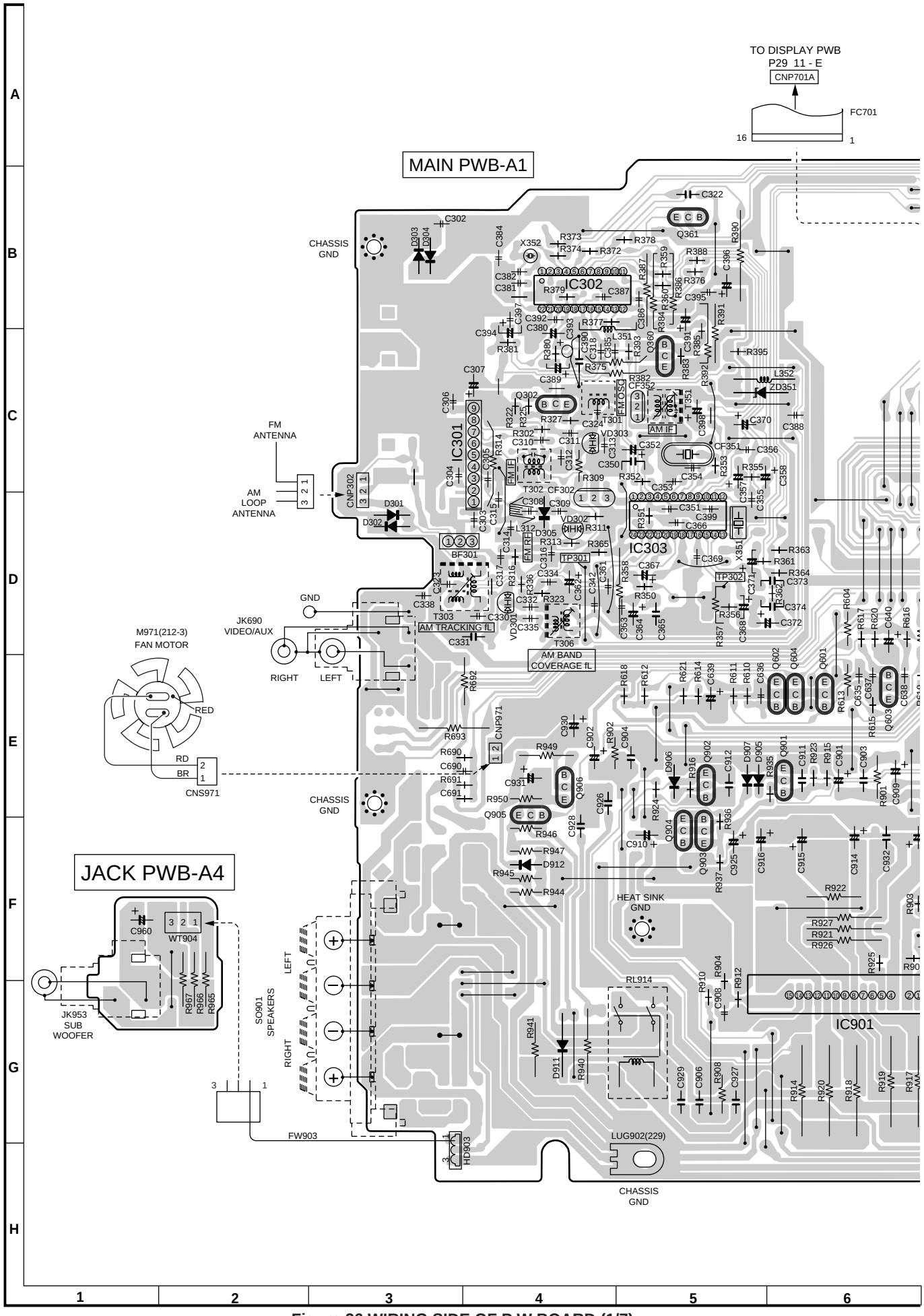
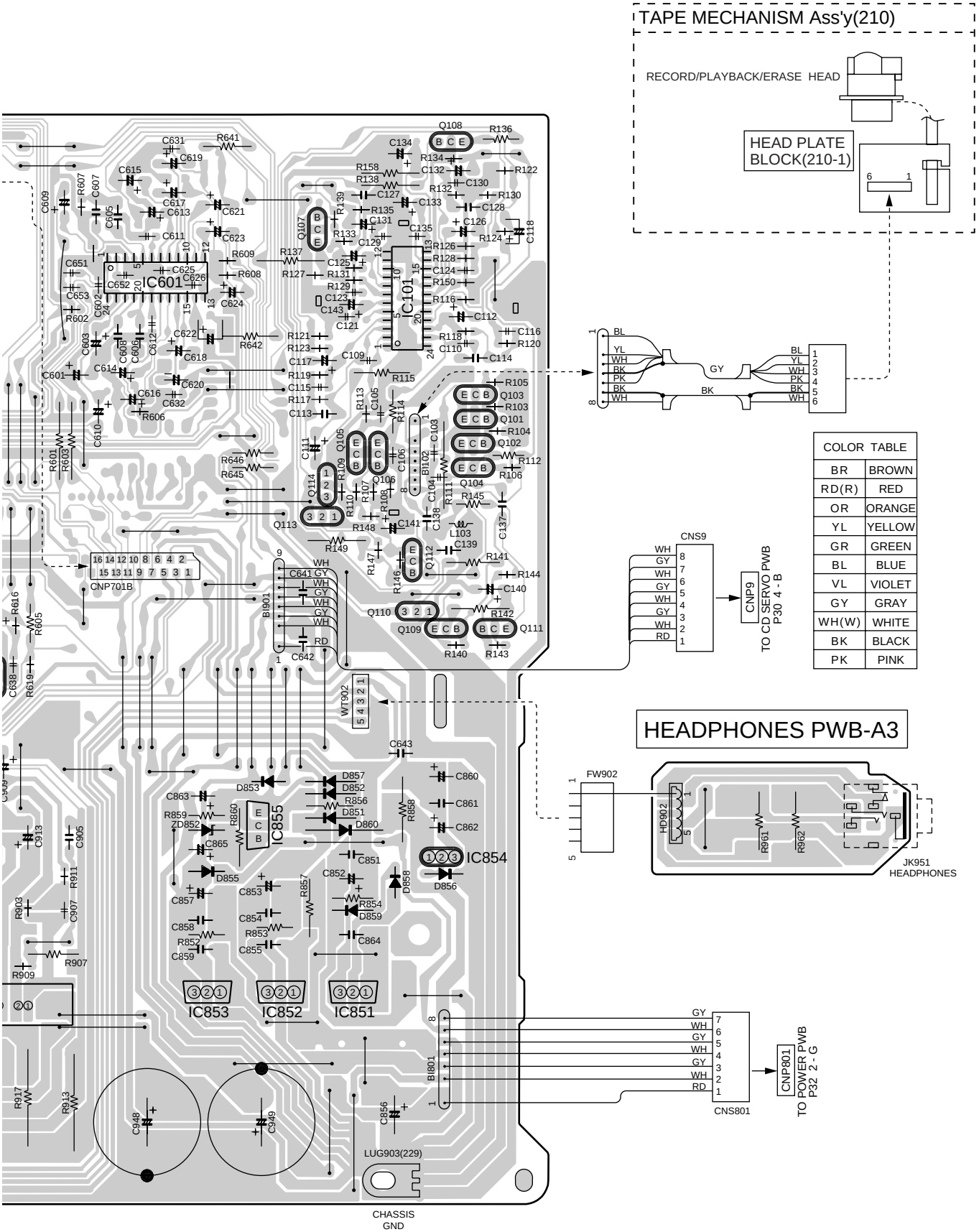


Figure 26 WIRING SIDE OF P.W.BOARD (1/7)



7	8	9	10	11	12

Figure 27 WIRING SIDE OF P.W.BOARD (2/7)

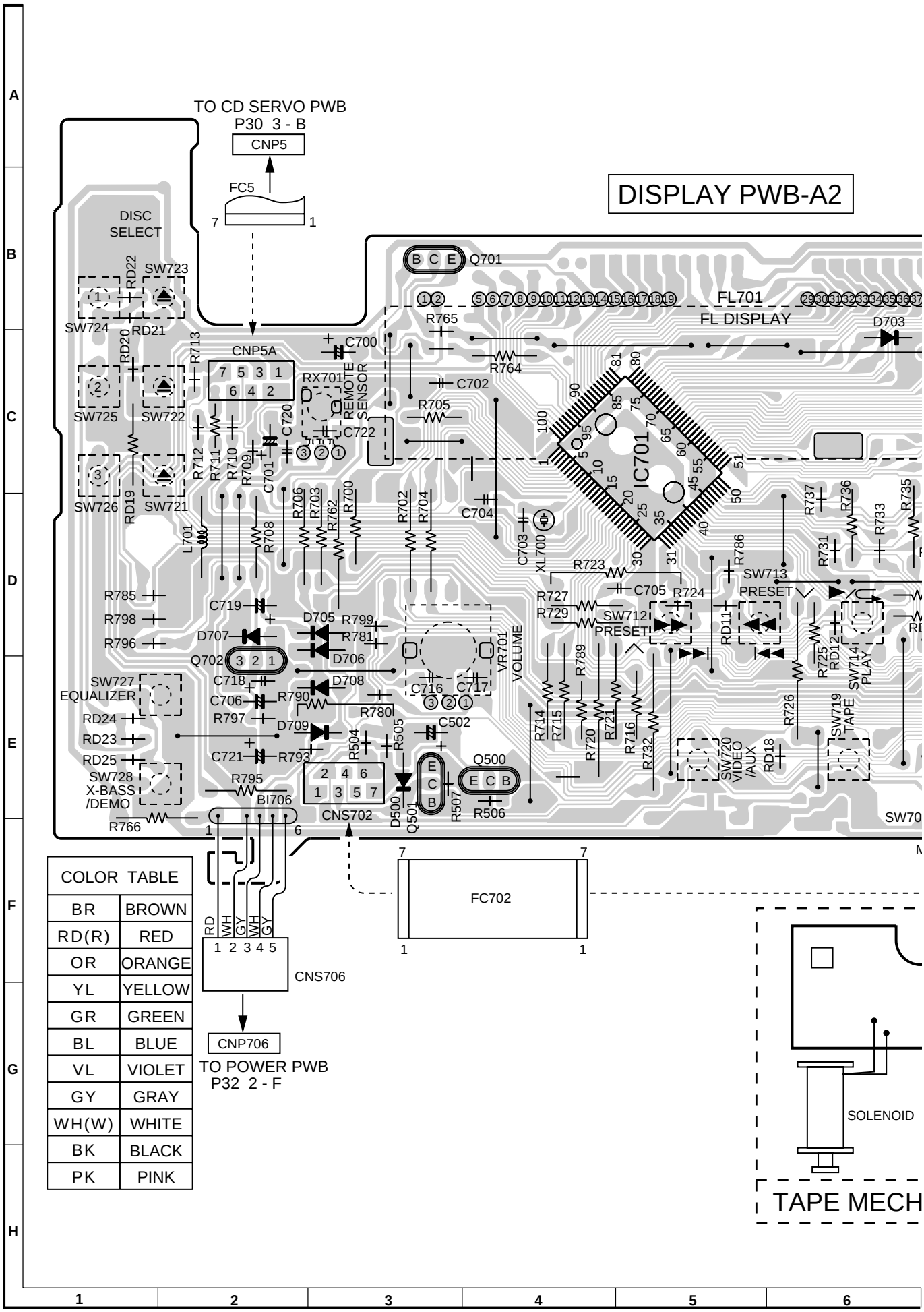
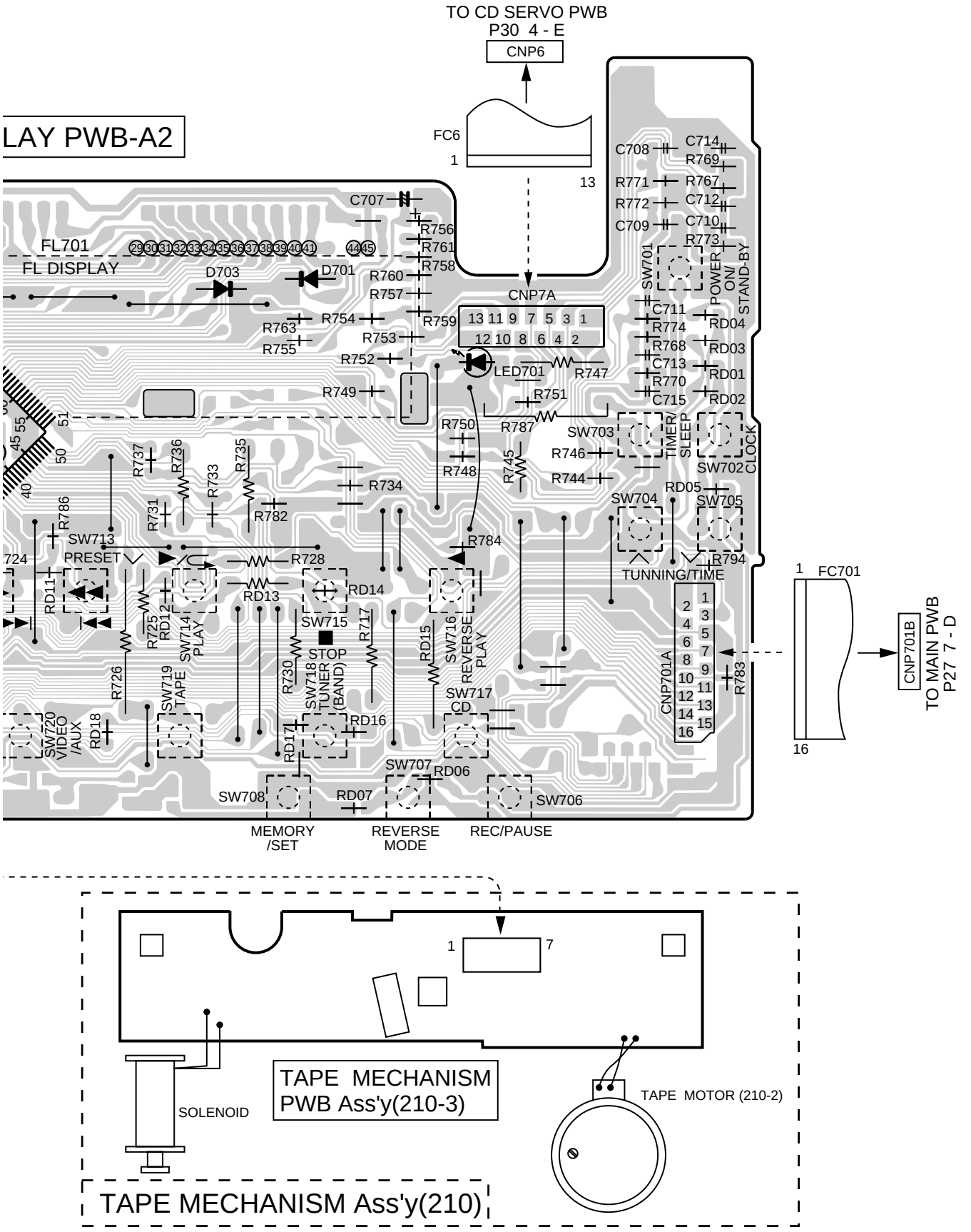
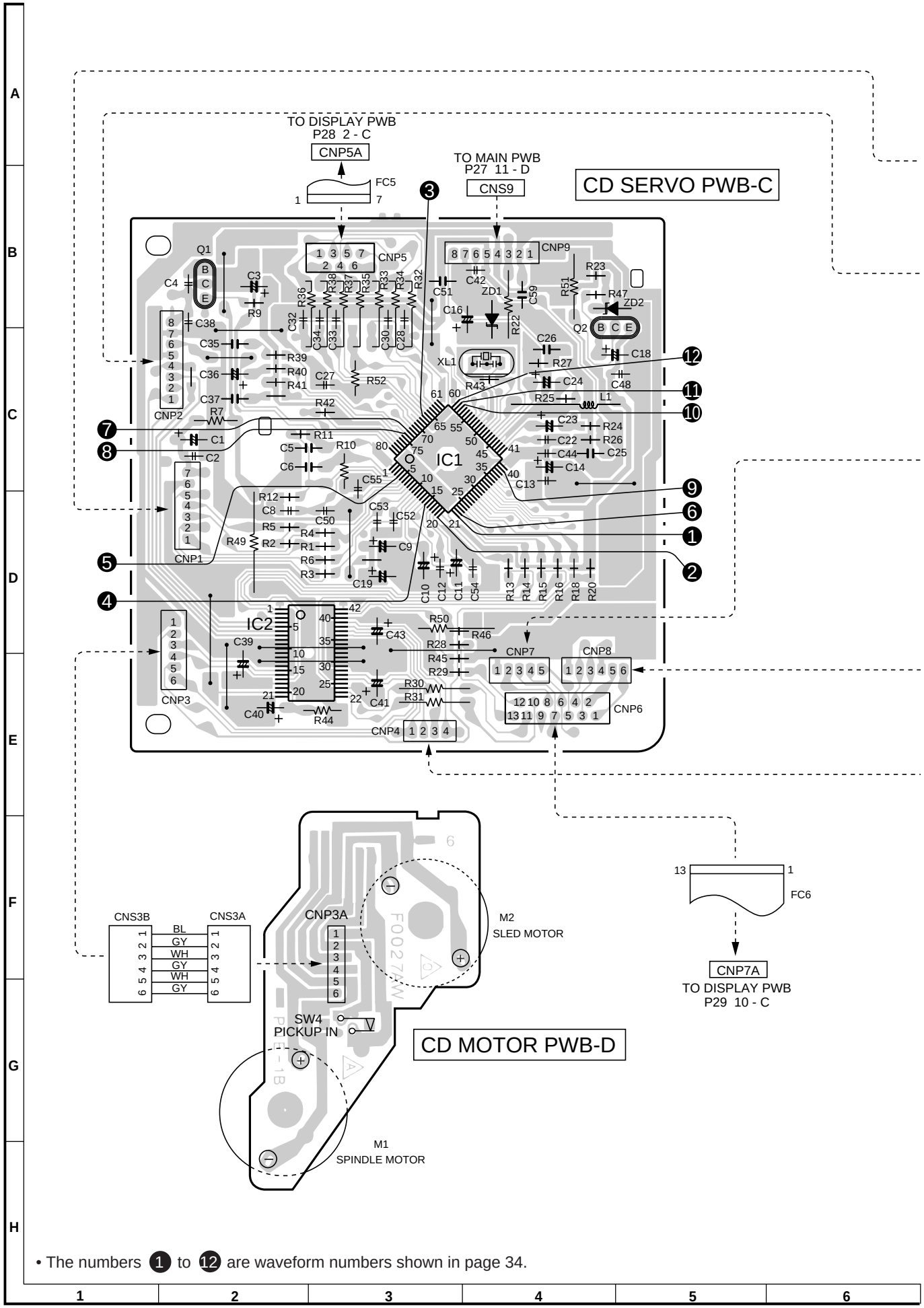


Figure 28 WIRING SIDE OF P.W.BOARD (3/7)



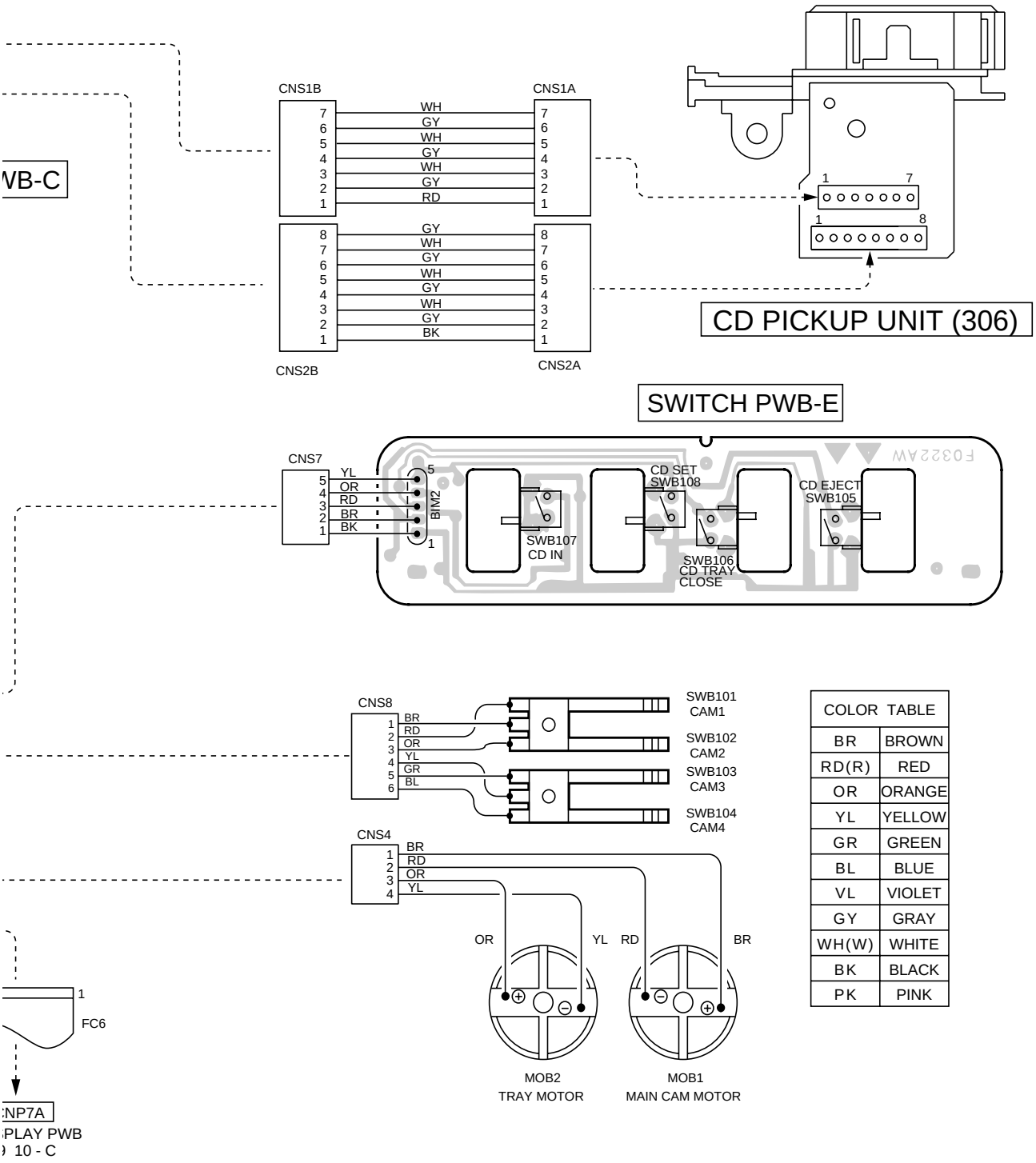
7	8	9	10	11	12

Figure 29 WIRING SIDE OF P.W.BOARD (4/7)



• The numbers ❶ to ⓬ are waveform numbers shown in page 34.

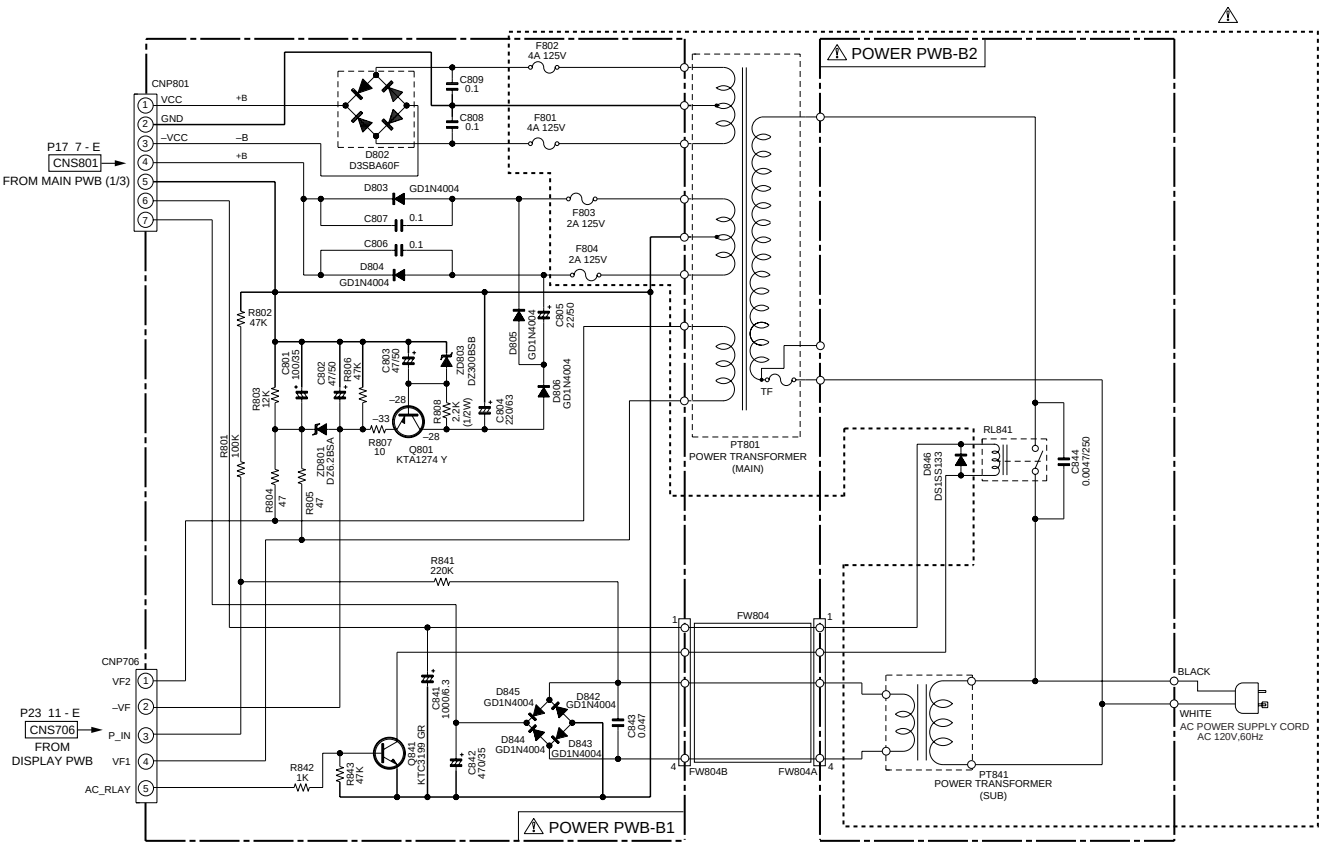
Figure 30 WIRING SIDE OF P.W.BOARD (5/7)

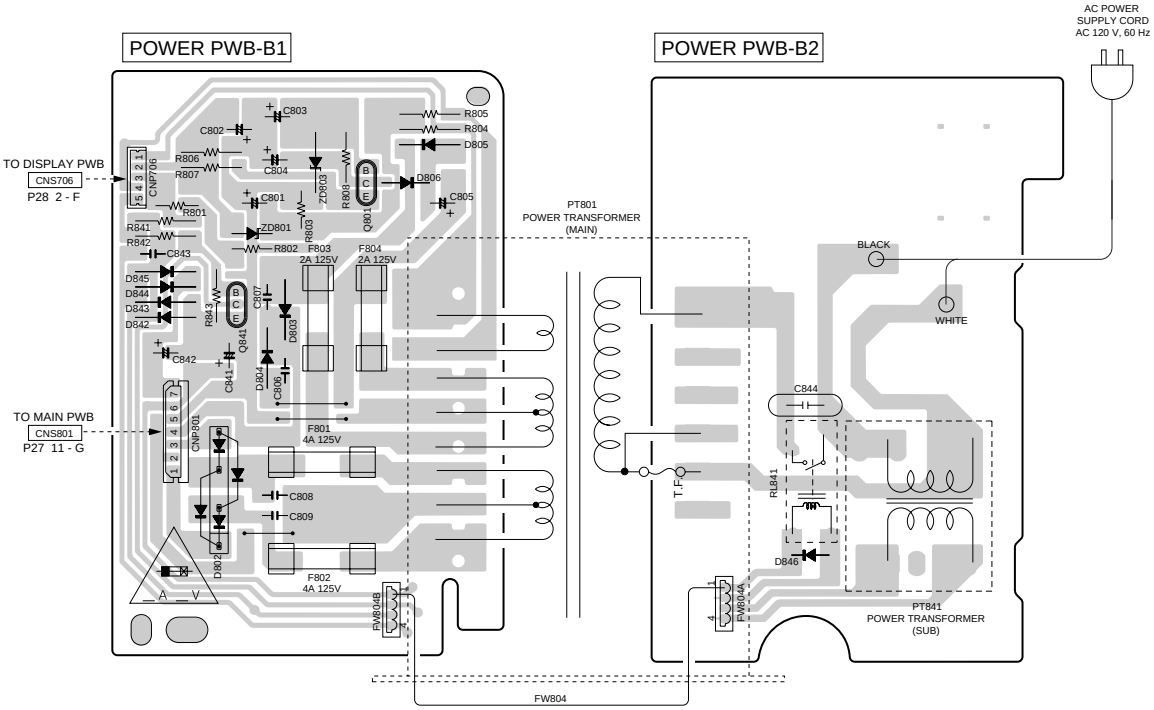


COLOR TABLE	
BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

7	8	9	10	11	12

Figure 31 WIRING SIDE OF P.W.BOARD (6/7)





• NOTES ON SCHEMATIC DIAGRAM can be found on page 12.

Figure 32 SCHEMATIC DIAGRAM (11/11) / WIRING SIDE OF P.W.BOARD (7/7)

VOLTAGE

IC1	
PIN NO.	VOLTAGE
1	1.62 V
2	1.02 V
3	1.62 V
4	1.88 V
5	3.30 V
6	0 V
7	1.67 V
8	1.67 V
9	1.67 V
10	1.67 V
11	1.67 V
12	1.67 V
13	1.61 V
14	1.61 V
15	0 V
16	0 V
17	0 V
18	3.30 V
19	0 V
20	1.66 V
21	1.66 V
22	1.66 V
23	1.66 V
24	1.66 V
25	0 V
26	3.30 V
27	0 V
28	0 V
29	0 V
30	3.30 V
31	0 V
32	0 V
33	0 V
34	0 V
35	1.63 V
36	0 V
37	0 V
38	3.30 V
39	0 V
40	0 V
41	3.73 V
42	3.73 V
43	0 V
44	0 V
45	3.72 V
46	3.74 V
47	3.30 V
48	3.30 V
49	0 V
50	0 V
51	0 V
52	3.30 V
53	0 V
54	0 V
55	0 V
56	0 V
57	0 V
58	3.30 V
59	0 V
60	0 V
61	0 V
62	0 V
63	0 V
64	3.28 V
65	4.93 V
66	4.91 V
67	0 V
68	4.92 V
69	0 V
70	3.52 V
71	3.52 V
72	2.37 V
73	0.96 V
74	2.35 V
75	0 V
76	1.04 V
77	3.29 V
78	2.53 V
79	0 V
80	3.28 V

IC2	
PIN NO.	VOLTAGE
1	1.68 V
2	1.68 V
3	1.87 V
4	2.13 V
5	2.13 V
6	2.13 V
7	2.13 V
8	0 V
9	0 V
10	0 V
11	0 V
12	0 V
13	0 V
14	0 V
15	2.13 V
16	2.13 V
17	1.68 V
18	4.90 V
19	2.91 V
20	1.68 V
21	0 V
22	0 V
23	4.90 V
24	4.90 V
25	1.68 V
26	2.13 V
27	2.13 V
28	4.90 V
29	0 V
30	0 V
31	0 V
32	0 V
33	0 V
34	0 V
35	0 V
36	4.20 V
37	0 V
38	3.52 V
39	3.52 V
40	7.72 V
41	0.33 V
42	0.33 V

IC101	
PIN NO.	VOLTAGE
1	0 V
2	0 V
3	0.58 V
4	1.94 V
5	0 V
6	1.32 V
7	0 V
8	0.58 V
9	3.26 V
10	3.26 V
11	0 V
12	0 V
13	6.64 V
14	4.01 V
15	0 V
16	3.28 V
17	0.58 V
18	0 V
19	2.55 V
20	0 V
21	1.96 V
22	0.56 V
23	0 V
24	0 V

IC301	
PIN NO.	VOLTAGE
1	0.8 V
2	1.5 V
3	3.6 V
4	1.5 V
5	0 V
6	3.8 V
7	2.8 V
8	3.6 V
9	3.6 V

IC302	
PIN NO.	VOLTAGE
1	2.54 V
2	0 V
3	0 V
4	0 V
5	0 V
6	5.00 V
7	9.88 V
8	4.68 V
9	0 V
10	0 V
11	5.14 V
12	0 V
13	5.14 V
14	0 V
15	0 V
16	2.56 V
17	5.16 V
18	0 V
19	0 V
20	9.89 V
21	0 V
22	2.54 V

IC303	
PIN NO.	VOLTAGE
1	2.10 V
2	5.07 V
3	2.10 V
4	2.10 V
5	0 V
6	5.15 V
7	0 V
8	3.51 V
9	5.06 V
10	4.34 V
11	1.93 V
12	0 V
13	2.26 V
14	1.20 V
15	1.20 V
16	2.09 V
17	0 V
18	1.39 V
19	2.13 V
20	1.39 V
21	2.08 V
22	2.08 V
23	5.06 V
24	3.55 V

IC601	
PIN NO.	VOLTAGE
1	0 V
2	0 V
3	0 V
4	4.95 V
5	0 V
6	0 V
7	4.93 V
8	0 V
9	0 V
10	0 V
11	4.93 V
12	0 V
13	4.93 V
14	4.93 V
15	0 V
16	4.93 V
17	4.96 V
18	4.93 V
19	4.93 V
20	4.93 V
21	4.95 V
22	4.95 V
23	9.90 V
24	0 V

IC901	
PIN NO.	VOLTAGE
1	–0.13 V
2	–0.14 V
3	———
4	35.1 V
5	–33.70 V
6	0 V
7	0 V
8	35.9 V
9	–35.9 V
10	0 V
11	0 V
12	–34.8 V
13	0 V
14	–0.14 V
15	–0.13 V

IC701			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	4.76 V	51	4.94 V
2	4.65 V	52	0 V
3	0 V	53	0 V
4	0 V	54	4.94 V
5	4.65 V	55	0 V
6	4.70 V	56	1.77 V
7	4.74 V	57	1.73 V
8	0 V	58	1.73 V
9	0 V	59	0 V
10	4.85 V	60	0.39 V
11	2.29 V	61	0 V
12	1.98 V	62	0 V
13	0 V	63	4.78 V
14	4.60 V	64	4.78 V
15	0 V	65	4.78 V
16	4.75 V	66	0 V
17	0 V	67	0 V
18	0 V	68	0 V
19	0 V	69	–28.90 V
20	0 V	70	–28.90 V
21	0 V	71	–28.90 V
22	0 V	72	–28.90 V
23	0 V	73	–28.90 V
24	5.00 V	74	–28.90 V
25	0 V	75	–28.90 V
26	4.94 V	76	–28.90 V
27	1.39 V	77	–28.90 V
28	5.00 V	78	–28.90 V
29	5.00 V	79	–29.36 V
30	0 V	80	–29.36 V
31	0.32 V	81	–29.36 V
32	5.00 V	82	–29.36 V
33	5.00 V	83	–29.36 V
34	4.78 V	84	–29.36 V
35	5.00 V	85	–29.36 V
36	1.94 V	86	–29.36 V
37	4.94 V	87	–29.36 V
38	5.00 V	88	–29.36 V
39	4.90 V	89	–29.36 V
40	0 V	90	–29.36 V
41	1.94 V	91	–29.36 V
42	13.21 V	92	–26.33 V
43	13.21 V	93	–26.33 V
44	13.21 V	94	–26.33 V
45	3.75 V	95	–26.33 V
46	4.78 V	96	–26.33 V
47	4.64 V	97	–26.33 V
48	0 V	98	–26.33 V
49	0 V	99	–26.33 V
50	0 V	100	–26.33 V

IC851	
PIN NO.	VOLTAGE
1	19.57 V
2	1.33 V
3	13.23 V

IC852	
PIN NO.	VOLTAGE
1	19.57 V
2	0 V
3	4.95 V

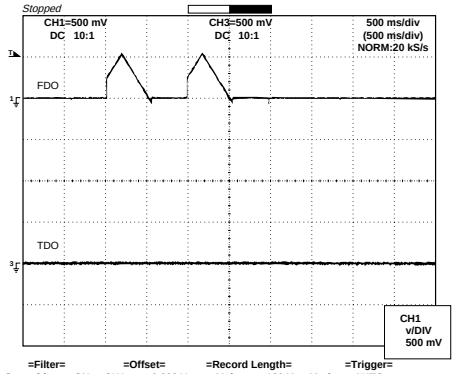
IC853	
PIN NO.	VOLTAGE
1	19.57 V
2	0 V
3	4.95 V

IC854	
PIN NO.	VOLTAGE
1	5.66 V
2	0.61 V
3	9.33 V

IC855	
PIN NO.	VOLTAGE
1	8.29 V
2	13.23 V
3	7.79 V

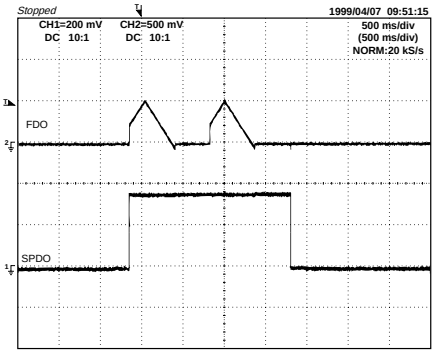
WAVEFORMS OF CD CIRCUIT

1 IC1 (21)
2 IC1 (20)



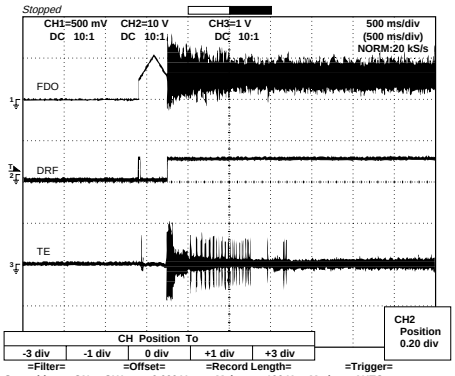
=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.000 V	Main :	100 K	Mode :	AUTO
BW : FULL	CH2 :	0.0 V	Zoom :	2 K	Type :	EDGE CH1
	CH3 :	0.000 V			Delay :	0.0 ns
	CH4 :	0.00 V			Hold off :	0.2 µs

1 IC1 (21)
6 IC1 (22)



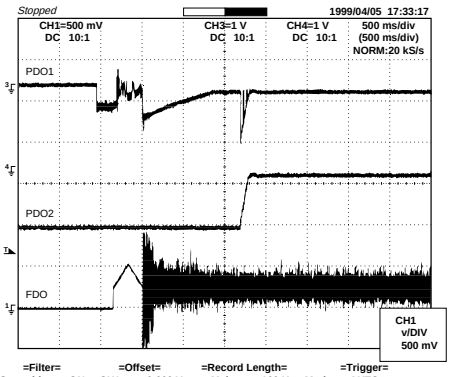
=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.000 V	Main :	100 K	Mode :	NORMAL
BW : FULL	CH2 :	0.000 V	Zoom :	2 K	Type :	EDGE CH2
	CH3 :	0.00 V			Delay :	2.924 ms
	CH4 :	0.00 V			Hold off :	0.2 µs

1 IC1 (21)
3 IC1 (67)
4 IC1 (15)



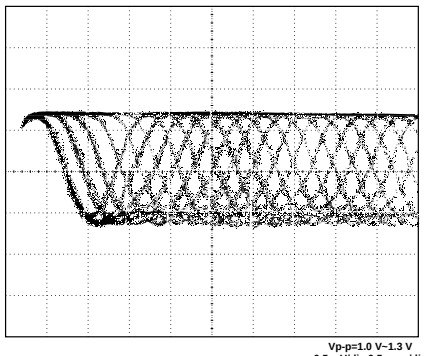
=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.000 V	Main :	100 K	Mode :	AUTO
BW : FULL	CH2 :	0.0 V	Zoom :	2 K	Type :	EDGE CH1
	CH3 :	0.00 V			Delay :	0.0 ns
	CH4 :	0.00 V			Hold off :	0.2 µs

7 IC1 (73)
8 IC1 (74)
1 IC1 (21)



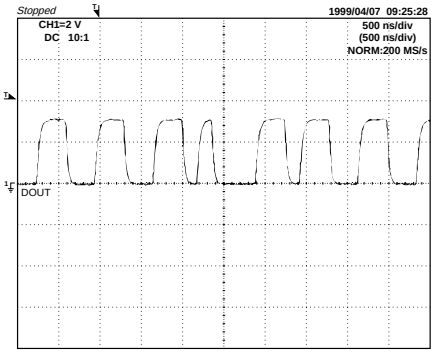
=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.000 V	Main :	100 K	Mode :	AUTO
BW : FULL	CH2 :	0.0 V	Zoom :	2 K	Type :	EDGE CH2
	CH3 :	0.00 V			Delay :	0.0 ns
	CH4 :	0.00 V			Hold off :	0.2 µs

5 IC1 (4)



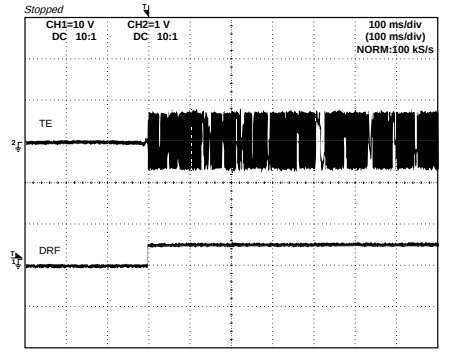
Vp-p=1.0 V~1.3 V
0.5 mV/div,0.5 µsec/div

9 IC1 (39)



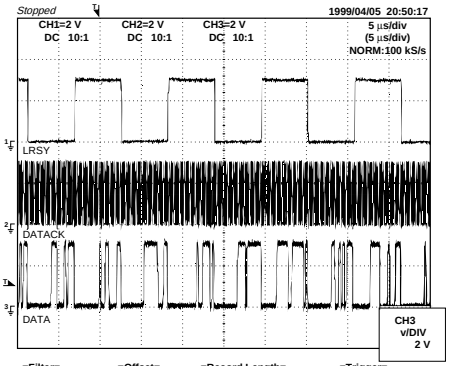
=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.00 V	Main :	1 K	Mode :	NORMAL
BW : FULL	CH2 :	0.00 V	Zoom :	100	Type :	EDGE CH1
	CH3 :	0.00 V			Delay :	2.887 ms
	CH4 :	0.00 V			Hold off :	0.2 µs

4 IC1 (15)
3 IC1 (67)



=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.0 V	Main :	100 K	Mode :	NORMAL
BW : FULL	CH2 :	0.00 V	Zoom :	2 K	Type :	EDGE CH1
	CH3 :	0.00 V			Delay :	2.924 ms
	CH4 :	0.00 V			Hold off :	0.2 µs

10 IC1 (58)
11 IC1 (59)
12 IC1 (60)



=Filter=	=Offset=		=Record Length=		=Trigger=	
Smoothing : ON	CH1 :	0.00 V	Main :	5 K	Mode :	AUTO
BW : FULL	CH2 :	0.00 V	Zoom :	100	Type :	EDGE CH3
	CH3 :	0.00 V			Delay :	0.0 ns
	CH4 :	0.00 V			Hold off :	0.2 µs

TROUBLESHOOTING

When the CD does not function

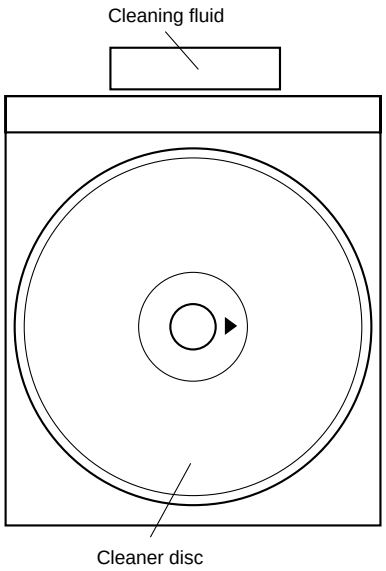
The CD section may not operate when the objective lens of the optical pickup is dirty. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.
Remove the cabinet and follow the trouble shooting instructions.
"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn the power off.
Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.
Do not touch the lens with the bare hand.

		Parts code
1.	CD optical pickup Lens cleaner disc	UDSKA0004AFZZ

HOW TO USE

1. Using the brush in the cleaner cap, apply 1 or 2 drops of the cleaning fluid to the brush on the CD cleaner disc which has the mark next to it.
2. Place the CD cleaner disc onto the CD disc tray with the brush side down,then press the play button.
3. You will hear music for about 20 seconds and the CD player will automatically stop. If it still play continuously, press the stop button.



CAUTION

- The CD lens cleaner should be effective for 30-50 operations, however if the brushes become worn out earlier then please replace the cleaner disc.
- If the CD cleaner brushes become very wet then wipe off any excess fluid with a soft cloth.
- Do not drink the cleaner fluid or allow it contact with the eyes. In the event of this happening then drink and / or rinse with clean water and seek medical advice.
- The CD cleaner disc must not be used on car CD players or on computer CD-ROM drives.
- All rights reserved. Unauthorized duplicating, broadcasting and renting this product is prohibited by law.

When a CD cannot be played

1. "E-CD01" is displayed.

(1) Check the power to IC1 (LC78646E), the presence of the clock signal (16.9344 MHz) and the status of the RESET terminal (pin 66 on IC1).
(2) Does the pickup move to the PICKUP-IN Switch (SW4) position ?

If (1) and (2) are OK, check the system microcomputer (especially the communication line with the DSP).

2. Pressing the CD operation key is accepted, but playback does not occur.

(1) Focus-HF system check
(2) Tracking system check
(3) Spin system check
(4) PLL system check
(5) Others

(1) Focus-HF system check.

Although a CD is inserted and the cover is closed, "NO DISC" is displayed.

Press the Tray1 CD Eject Button (SW723) without inserting a disc, and try starting the playback operation.

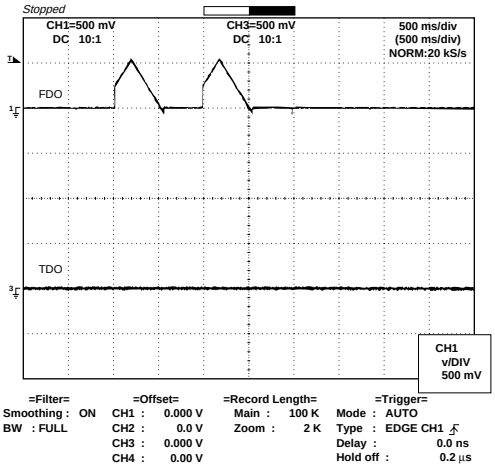


Figure 36-1

1. Does the pickup move to the PICKUP-IN Switch (SW4) position ?
   - No → Sled motor (M2).
   - Yes ↓
2. Does the focus (lens) move up and down ? (Waveform drawing Figure 36-1)
   - No → Check the focus peripheral circuit.
   - Yes ↓
3. Is the laser lit ?
   - No → Check the laser diode driver Q1 peripheral circuit.
   - Yes ↓
4. Is the turntable rotating ?
   - No → Spindle motor (M1).

When a disc is loaded, start playback operation.

1. Is focus servo activated ? (Waveform drawing Figure 36-2)
   - No → Pins 7~11, 79 and 80 on IC1 Check the laser diode driver Q1 peripheral circuit.
   - Yes ↓
2. Does DRF change from "L" to "H" ?
   - No → Is the disc rotating ?
     - No → Check the spin system.
     - Yes → If the disc is spinning and a HF waveform is generated, DRF will go H.
   - Yes ↓
3. Is the HF waveform normal ? (Waveform drawing Figure 36-3)
   - No → If the level is not normal.

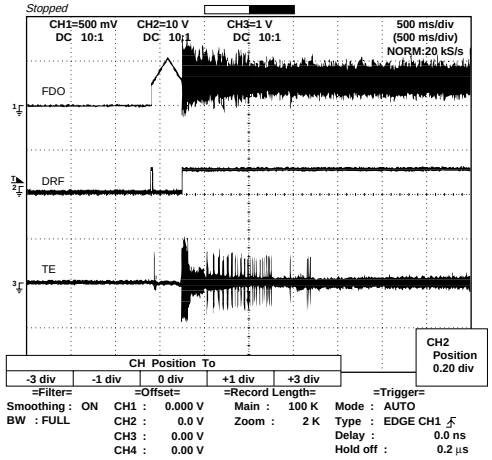


Figure 36-2

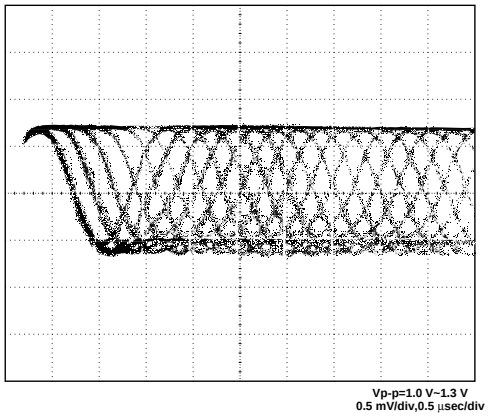


Figure 36-3

(2) Tracking system check.

Check the TE waveform at pin 15 on IC1.

If the waveform shown in Figure 37-1 appears and soon after NO DISC appears ?

Yes → The tracking servo is not activated.
Check the peripheral circuits at pins 14, 15 and 20 on IC1, and CNS1A/B.

No ↓

"Initialization" is possible, but play is not possible ?

Yes → A normal jump operation cannot be completed or the beginning of the track cannot be found.
Check the around pin 20 on IC1.

No ↓

"Initialization" is not possible. → Data cannot be read. Check the VCO-PLL (Pin73~78 on IC1) system.

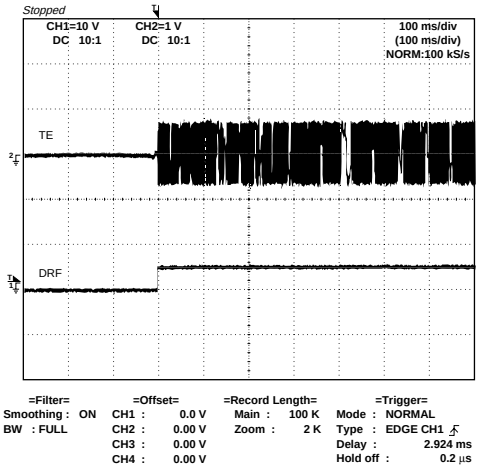


Figure 37-1

(3) Spin system check.

Press the OPEN/CLOSE switch without inserting a disc, and then try starting the play operation.

1. The turntable rotates a little ?
(Waveform drawing Figure 37-2)

Yes → The spin driver circuit is OK.

No ↓

2. The turntable doesn't rotate. → Check around pin 22 on IC1, pins 26 and 27 on IC2, and CNS3A/B.

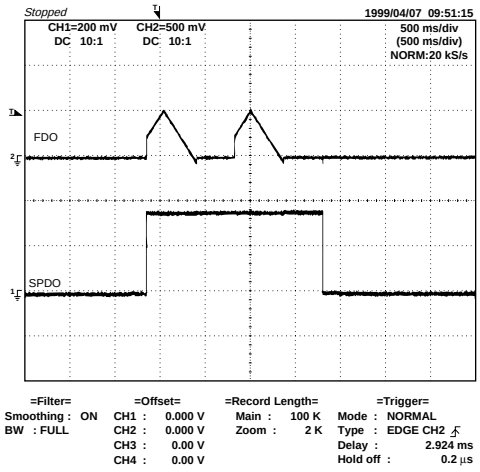


Figure 37-2

(4) PLL system check.

When a disc is loaded, start play operation.

↓

The HF waveform is normal, but the TOC data cannot be read.

↓

Check the PDO waveform. (Figure 38-1)

↓

Check around pins 73~78 on IC1.

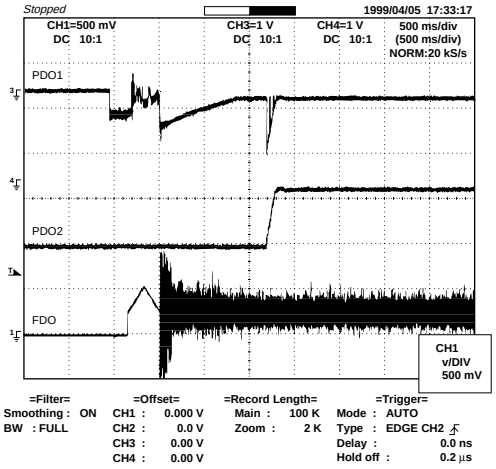


Figure 38-1

(5) Others.

The HF waveform is normal and the time is displayed normally, but no sound is produced. Or the sound has dropouts.

Is pin 52 (C2F) on IC1 "L" ?

No → There are too many error flags on a damaged disc which makes error correction impossible.

↓

Check again using a known good disc.

Yes

↓

1. When playing at normal speed.
   Check the peripheral circuit at pin 39 (DOUT) on IC1 and the waveform (Figure 38-2).

↓

If OK, Check the unit.

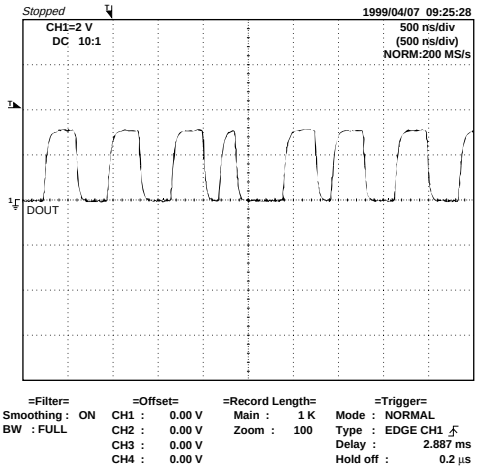


Figure 38-2

FUNCTION TABLE OF IC

IC1 VHiLC78646E-1: CD Servo (LC78646E) (1/2)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
1	SLCO	Output	—	For slice level control.	Control output.
2	SLCIST	Input	—		Resistor connection terminal for SLCO output current setting.
3	EFMIN	Input	—		RF signal input terminal.
4	RF	Output	—	RF signal monitor terminal.	
5	RFVDD	Input	—	RF power terminal.	
6	RFVSS	—	—	RF earth terminal. To be connected to 0 V.	
7	FIN1	Input	—	A+C signal input terminal.	
8	FIN2	Input	—	B+D signal input terminal.	
9	TIN1	Input	—	E signal input terminal.	
10	TIN2	Input	—	F signal input terminal.	
11	VREF	Output	RFVDD/2	VREF voltage output terminal.	
12	REF1	Input	—	Reference supply setting terminal.	
13*	FE	Output	ZHI	FE signal monitor terminal.	
14	TEC	Output	—	LPF capacitor connection terminal for TE signal.	
15*	TE	Output	ZHI	TE signal monitor terminal.	
16*	RFMON	Output	ZHI	RF internal signal monitor terminal.	
17	JITTC	—	—	Capacitor connection terminal for jitter detection.	
18	ADAVDD	Input	—	Power terminal for servo A/D, D/A.	
19	ADAVSS	—	—	Earth terminal for serve A/D, D/A. To be connected to 0 V.	
20	TDO	Output	ADAVDD/2	Output terminal for tracking control. D/A output.	
21	FDO	Output	ADAVDD/2	Output terminal for focus control. D/A output.	
22	SPDO	Output	ADAVDD/2	Output terminal for spindle control. D/A output.	
23	SLDO	Output	ADAVDD/2	Output terminal for sled control. D/A output.	
24*	GPDAC	Output	ADAVDD/2	Servo D/A general-purpose output terminal.	
25*	CONT4	Input/Output	Input Mode	General-purpose I/O terminal 4.	Controlled by commands from the microcomputer. When not used, set them as input terminals and connect to 0 V, or set them as output terminals and leave open.
26	CONT5	Input/Output	Input Mode	General-purpose I/O terminal 5.	
27*	SBCK/CONT6	Input/Output	Input Mode	General-purpose I/O terminal 6 or Subcode reading clock input terminal.	
28	SBCK/FG	Input	—	Subcode reading clock input terminal/FG signal input terminal/external emphasis setting terminal. Terminal functions are set by commands. When not used, connect to 0 V.	
29*	DEFECT	Output	L	Defect terminal.	
30*	V/*P	Output	H	Auto switching monitor output terminal for rough servo phase control. “H”: rough servo, “L”: phase servo.	
31*	FSEQ	Output	L	Sync signal detection output terminal. The status changes to “H” when the sync signal detected in EFM and the sync signal of internal generation are identified.	
32*	MONI1	Output	L	Internal signal monitor terminal 1.	
33*	MONI2	Output	L	Internal signal monitor terminal 2.	
34*	MONI3	Output	L	Internal signal monitor terminal 3.	
35*	MONI4	Output	L	Internal signal monitor terminal 4.	
36*	MONI5	Output	L	Internal signal monitor terminal 5.	
37	VSS	—	—	Digital system earth terminal. To be connected to 0 V.	
38	VDD	Input	—	Digital system power terminal.	
39*	DOUT	Output	L	Digital OUT output terminal. (EIAJ format)	
40	TEST	Input	L	Input terminal for test. To be connected to 0 V.	
41	LVDD	Input	—	Left channel D/A converter	Power supply for Left channel.
42	LCHO	Output	LVDD/2		Left channel output.
43	LVSS	—	—		GND for Left channel. Must be connected to 0 V.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

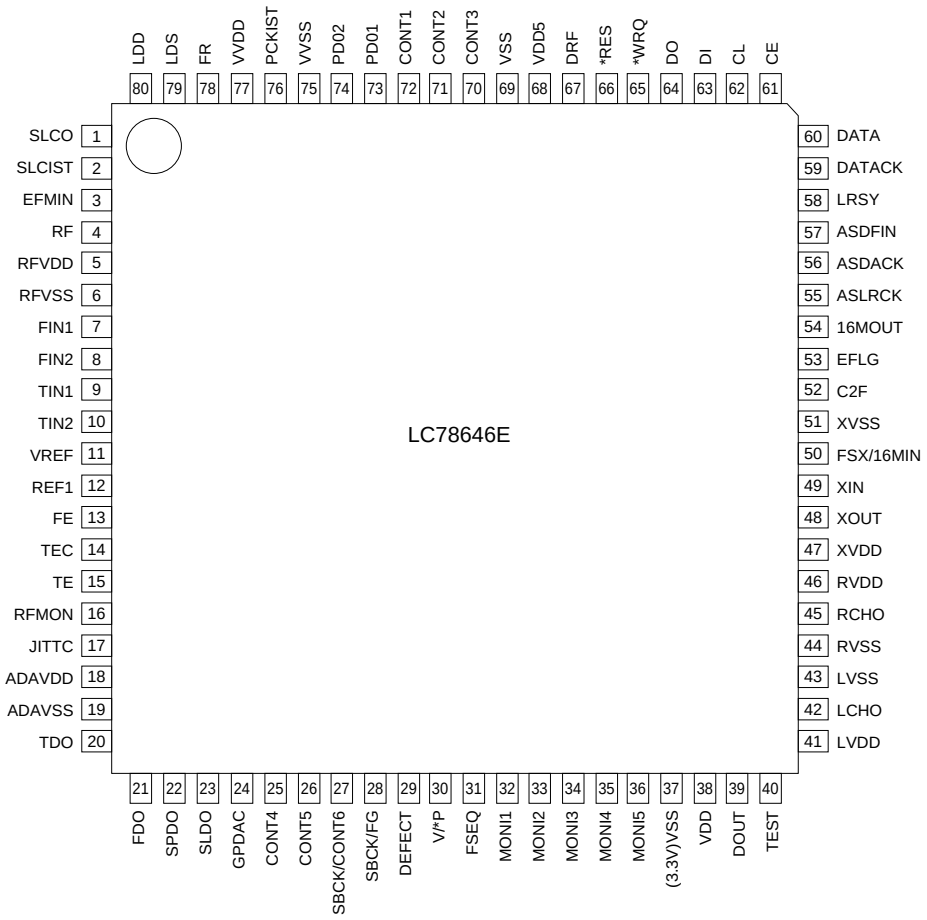
IC1 VHiLC78646E-1: CD Servo (LC78646E) (2/2)

Pin No.	Terminal Name	Input/Output	Setting in Reset	Function	
44	RVSS	—	—	Right channel D/A converter	GND for Right channel. Must be connected to 0 V.
45	RCHO	Output	LVDD /2		Right channel output.
46	RVDD	Input	—		Power supply for Right channel.
47	XVDD	Input	—	Crystal Oscillator	Power supply for crystal oscillator.
48	XOUT	Output	Oscillator		Connected for the 33.8688 MHz crystal oscillator ciement.
49	XIN	Input	Oscillator		
50	FSX/16MIN	Input/Output	Input	7.35 kHz Synchronization signal monitor port. or Clock input port for Digital filter & D/A	
51	XVSS	—	—	Crystal Oscillator	GND for crystal oscillator. Must be connected to 0 V.
52*	C2F	Output	H	C2 FLAG monitor port.	
53*	EFLG	Output	L	C1, C2 error corrected monitor port.	
54*	16MOUT	Output	Clock	16.9344 MHz output port.	
55	ASLRCK	Input	—	Anti-shock	Left/Right clock input port. (If this port does not use, must be connect to 0 V.)
56	ASDACK	Input	—		Bit clock input port. (If this port does not use, must be connect to 0 V.)
57	ASDFIN	Input	—		Left/Right channel data input port. (If this port does not use, must be connect to 0 V.)
58*	LRCK	Output	L	Digital data	Left/Right clock output port.
59*	BCK	Output	L		Bit clock output port.
60*	DATA	Output	L		Left/Right channel data output port.
61	CE	Input	—	Microcomputer Interface	Chip enable signal input port.
62	CL	Input	—		Data transfer clock input port.
63	DI	Input	—		Data input port.
64	DO	Output	(H)		Data output port. (N-ch. open drain output.)
65	*WRQ	Output	H		Interruption signal output.
66	*RES	Input	—	Chip reset signal input port. This port must be set LOW after first applied power on.	
67	DRF	Output	L	Focus detection output port.	
68	VDD5	Input	—	Power supply for Microprocessor.	
69	VSS	—	—	GND for digital circuit. Must be connected to 0 V.	
70*	CONT3	Input/Output	Input	General purpose port 3.	Controlled with serial data command from micro-computer. When not used, General purpose input/ output terminal. Set it as the input terminal and open it by connecting to 0 V, or set it as the output terminal and open it.
71*	CONT2	Input/Output	Input	General purpose port 2.	
72*	CONT1	Input/Output	Input	General purpose port 1.	
73	PDO1	Output	—	PLL	Internal VCO control phase comparator output port 1.
74	PDO2	Output	Input		Internal VCO control phase comparator output port 2.
75	VVSS	—	—		GND for internal VCO. Must be connected to 0 V.
76	PCKIST	Input	—		PDO output current adjustment resistor connection port.
77	VVDD	Input	—		Power supply for internal VCO.
78	FR	Input	—		VCO frequency range adjustment port.
79	LDS	Input	—	LASER power detected signal input port.	
80	LDD	Output	—	LASER power control signal output port.	

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

Be sure to supply the same potential to each power terminal. (VVDD, ADAVDD, VDD, LVDD, RVDD, XVDD)
Terminal witch is controlled by the power terminal (VDD5 V) for a microcomputer interface :
CE (61 pin), CL (62 pin), DI (63 pin), DO (64 pin), WRQ (65 pin), RES (66 pin), DRF (67 pin)

IC1 VHiLC78646E-1: CD Servo (LC78646E)



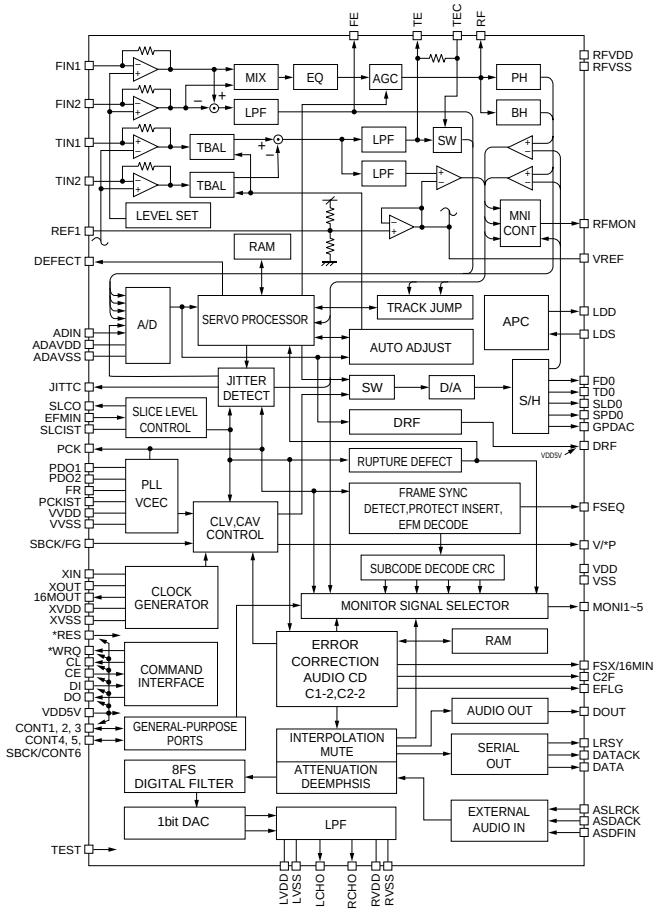
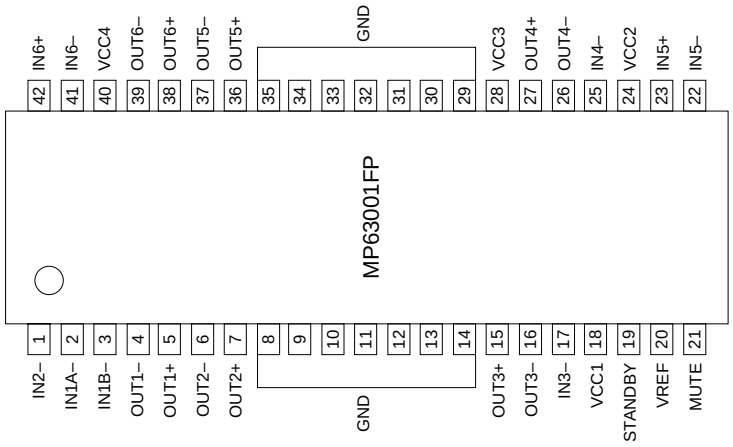


Figure 41 BLOCK DIAGRAM OF IC

IC2 VHIM63001FP-1: Focus/Tracking/Spin/Sled Driver (M63001FP)

Pin No.	Terminal Name	Function	Pin No.	Terminal Name	Function
1	IN2–	CH2 inverted input	22	IN5–	CH5 inverted input
2	IN1A–	CH1 inverted input	23	IN5+	CH5 non-inverted output
3*	IN1B–	CH1 output offset control	24	VCC2	Power supply 2 (CH4)
4	OUT1–	CH1 inverted output	25	IN4–	CH4 inverted input
5	OUT1+	CH1 non-inverted output	26	OUT4–	CH4 inverted output
6	OUT2–	CH2 inverted output	27	OUT4+	CH4 non-inverted output
7	OUT2+	CH2 non-inverted output	28	VCC3	Power supply 3 (CH5)
8-14	GND	GND	29-35	GND	GND
15	OUT3+	CH3 non-inverted output	36	OUT5+	CH5 non-inverted output
16	OUT3–	CH3 inverted output	37	OUT5–	CH5 inverted output
17	IN3–	CH3 inverted input	38	OUT6+	CH6 non-inverted output
18	VCC1	Power supply 1 (CH1,CH2,CH3)	39	OUT6–	CH6 inverted output
19	STANDBY	STANDBY signal input	40	VCC4	Power supply 4 (CH6)
20	VREF	CH1-CH4 Reference voltage input	41	IN6–	CH6 inverted input
21	MUTE	MUTE SIGNAL INPUT (CH6)	42	IN6+	CH6 non-inverted input

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



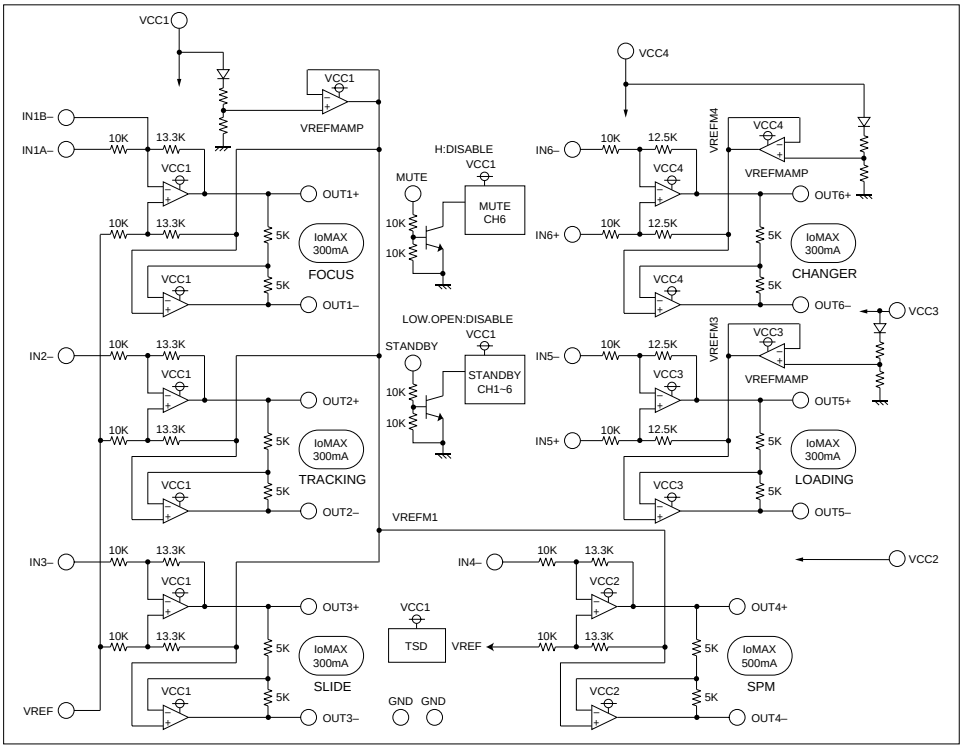


Figure 42 BLOCK DIAGRAM OF IC

IC601 VHiLC75341/-1: Audio Processor (LC75341)

Pin No.	Terminal Name	Function
1	DI	Serial data and clock input pin for control.
2	CE	Chip enable pin. Data written into an internal latch in a timing of "H" to "L". Each analog switch is activated. Data transfer enabled at "H" level.
3	VSS	Ground pin.
4	LOUT	Bass band filter comprising capacitor and resistor connection pin and bass/treble output pin.
5	LBASS	Bass band filter comprisingcapacitor and resistor connection pin.
6	LTRE	Treble band filter comprising capacitor and resistor connection pin.
7	LIN	Volume + equaliser output pin
8	LSEL0	Input selector output pin.
9-12	L4-1	Input signal pin.

Pin No.	Terminal Name	Function
13-16	R1-4	Input signal pin.
17	RSEL0	Input selector output pin.
18	RIN	Volume + equaliser output pin
19	RTRE	Treble band filter comprising capacitor and resistor connection pin.
20	RBASS	Bass band filter comprisingcapacitor and resistor connection pin.
21	ROUT	Bass band filter comprising capacitor and resistor connection pin and bass/treble output pin.
22	VREF	0.5x VDD voltage generation block for analog ground. Capacitor of several 10µF to be connected between VREF and AWSS (VSS) as a countermeasure against power ripple.
23	VDD	Supply pin
24	CLK	Serial data and clock input pin for control.

IC601 VHiLC75341/-1: Audio Processor (LC75341)

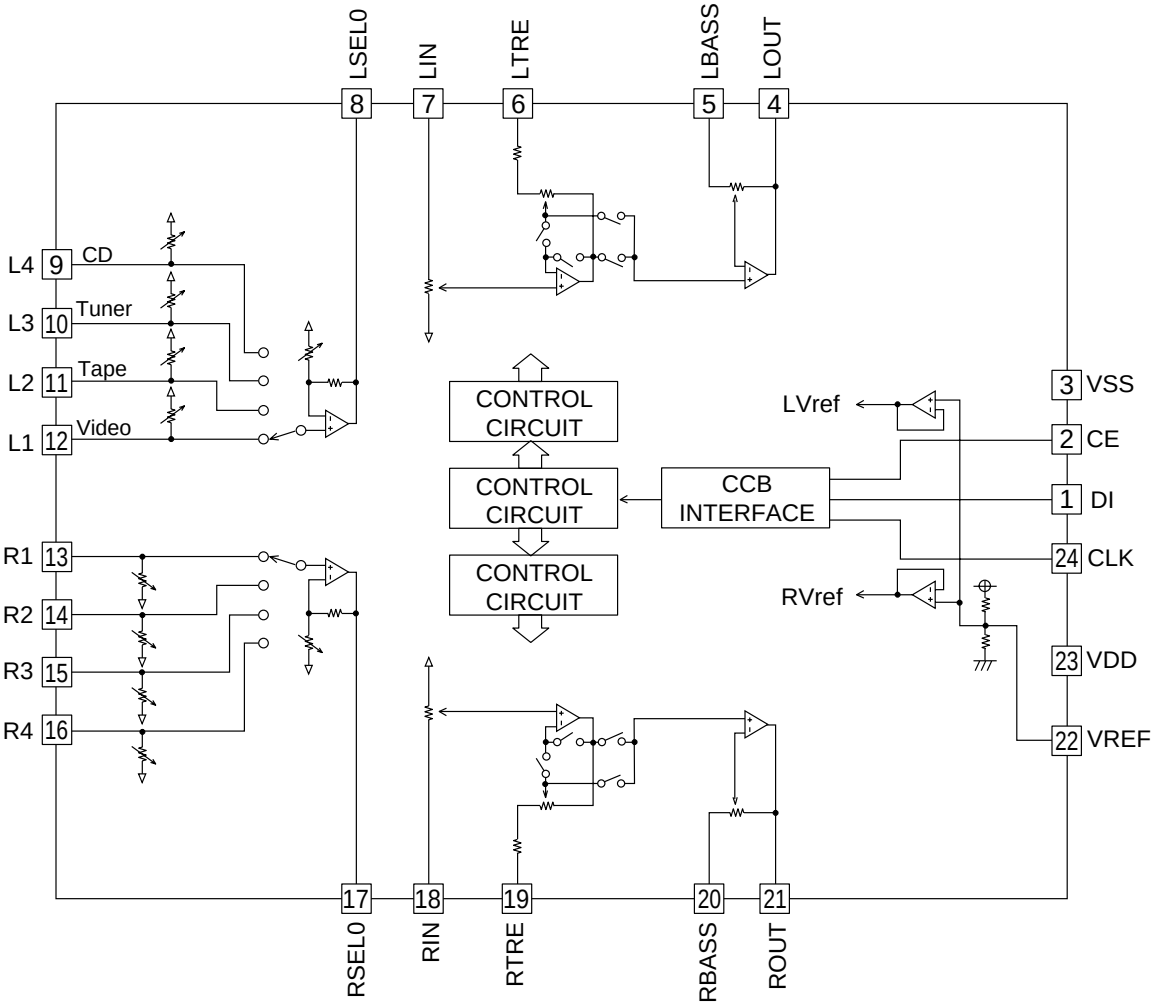


Figure 43 BLOCK DIAGRAM OF IC

IC701 RH-iX0574AWZZ: System Microcomputer (IX0574AW) (To Serial No.211XXXXX) (1/2)
IC701 RH-iX0578AWZZ: System Microcomputer (IX0578AW) (From Serial No.212XXXXX) (1/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1	VDD	VDD	Input	(+) Power supply.
2	P37	-20dBATT	Output	-20dB Attenuator.
3*	P36	NO USE	Output	Open
4	P35	T-BIAS	Output	Tape record bias.
5	P34	SP_RELAY	Output	Speaker relay control.
6	P33	T-REC/PLAY	Output	Tape REC/PLAY change.
7	P32	CD RESOUT	Output	CD DSP reset.
8	P31	AC_RELAY	Output	AC relay control.
9	P30	NO USE	Input	Connect to GND.
10	RESET	RESET	Input	Reset.
11	X2	X2	Output	Main clock.
12	X1	X1	Input	Main clock.
13	VPP/IC	VPP/IC	—	GND
14*	XT2	XT2	—	Open
15	P04	CD_DRF	Input	CD DRF level detection.
16	VDD	VDD	Input	(+) Power supply.
17	P27	CD CLK	Output	CD DSP clock.
18	P26	CD DI	Output	CD DSP command.
19	P25	CD DO	Input	CD DSP CODE Q out.
20	P24	CD CE	Output	CD DSP CE output.
21	P23	CE	Output	CE output.
22	P22	CLK	Output	Clock output.
23	P21	DI	Output	Data output.
24	P20	DO	Input	Data input.
25	AVSS	AVSS	—	Analog ground.
26	P17	NO USE	Input	Connect to GND.
27	ANI6	NO USE	Input	Connect to GND.
28	ANI5	FPA/FPB SW	Input	Tape F.P A/B SW & PLAY 2 SW.
29	ANI4	PROTECT	Input	Power abnormal detect.
30	ANI3	NO USE	Input	Connect to GND.
31-33	ANI2-ANI0	KEY 2-KEY 0	Input	Key input.
34	AVDD	AVDD	Input	Analog VDD.
35	AVREF	AVREF	—	Analog ref voltage.
36	INTP3	P_IN	Input	Power failure detect.
37	P02	CD_WRQ	Input	CD write read request.
38	INTP1	SP DET	Input	Speaker abnormal detect.
39	INTP0	REMOCON	Input	Remocon input.
40	VSS	VSS	—	Ground voltage.
41	P74	SMUTE	Output	System mute control.
42	P73	T1-RUN	Input	TAPE 1 RUN PULSE input.
43	P72	T_SOL_A	Output	Tape solenoid control.
44	P71	T_MOTOR	Output	Tape motor control.
45	P70	TIMER LED	Output	Timer LED control.
46	VDD	VDD	Input	(+) Power supply.
47	P127	JOG 1	Input	Volume jog input 1.
48	P126	JOG 2	Input	Volume jog input 2.
49	P125	NO USE	Input	Connect to GND.
50*	P124	NO USE	Output	Open
51*	P123	NO USE	Output	Open
52	P122	NO USE	Output	Open
53	P121	NO USE	Input	Open

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC701 RH-iX0574AWZZ: System Microcomputer (IX0574AW) (To Serial No.211XXXXX) (2/2)
IC701 RH-iX0578AWZZ: System Microcomputer (IX0578AW) (From Serial No.212XXXXX) (2/2)

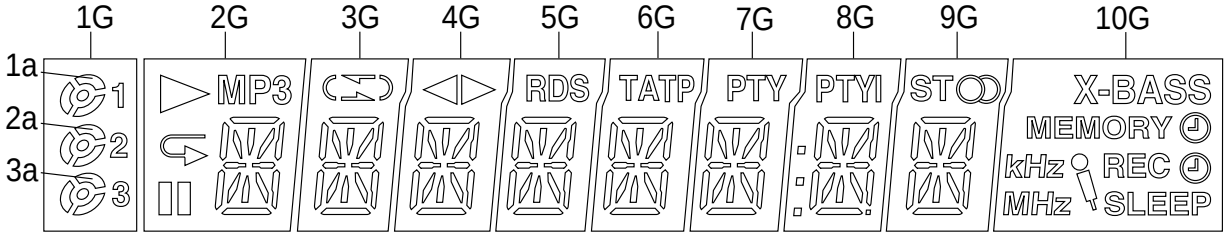
Pin No.	Port Name	Terminal Name	Input/Output	Function
54	P120	NO USE	Output	Open
55	P117	NO USE	Input	Open
56	P116	CAM 1 SW	Input	EH mecha CAM 1 SW detection.
57	P115	CAM 2 SW	Input	EH mecha CAM 2 SW detection.
58	P114	CAM 3 SW	Input	EH mecha CAM 3 SW detection.
59	P113	CAM 4 SW	Input	EH mecha CAM 4 SW detection.
60	P112	TRAY EJT SW	Input	EH mecha tray eject SW detection.
61	P111	TRAY CLS SW	Input	EH mecha tray close SW detection.
62	P110	TRAY IN SW	Input	EH mecha tray stock in SW detection.
63	P107	TRAY SET SW	Input	EH mecha tray set SW detection.
64	P106	C MOTOR–	Output	EH mecha CAM motor control.
65	P105	C MOTOR+	Output	EH mecha CAM motor control.
66	P104	T MOTOR–	Output	EH mecha tray motor control.
67	P103	T MOTOR+	Output	EH mecha tray motor control.
68	P102	T MOTOR H-L	Output	EH mecha tray speed control.
69*	P101/FIP30	NO USE	Output	Open
70	P100/FIP29	DIST IN	Input	Destination input.
71*	P97	NO USE	Output	Open
72	P96/FIP27	DIST0/S18	Output	Destination output./FL segment driver.
73	P95/FIP26	DIST1/S17	Output	Destination output./FL segment driver.
74-78	FIP25-FIP21	S16-S12	Output	FL segment driver.
79	VLOAD	VLOAD	Input	FL driver power supp. -30 V
80-90	FIP20-FIP10	S11-S1	Output	FL segment driver.
91-100	FIP9-FIP0	G10-G1	Output	FL grid driver.

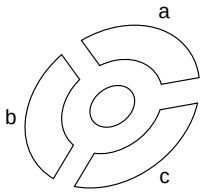
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

FL DISPLAY

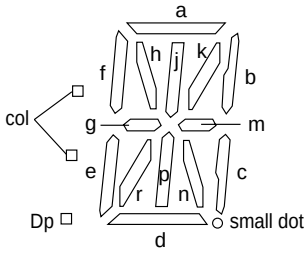
FL701 VVKNA10SS23-1

GRID ASSIGNMENT





(1G)



(2G~9G)

ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	○ 1	MP3	(	▷	RDS	TA	PTY	PTYI	ST	
P2	1a	▷	)	◁		TP		col		
P3	1b	▯▯	⇅					Dp		(white)
P4	1c	↻						small dot		(Rsh.o)
P5	○ 2	a	a	a	a	a	a	a	a	SLEEP
P6	2a	b	b	b	b	b	b	b	b	X-BASS
P7	2b	k	k	k	k	k	k	k	k	
P8	2c	j	j	j	j	j	j	j	j	
P9	○ 3	h	h	h	h	h	h	h	h	MEMORY
P10	3a	f	f	f	f	f	f	f	f	
P11	3b	m	m	m	m	m	m	m	m	
P12	3c	d	d	d	d	d	d	d	d	
P13		g	g	g	g	g	g	g	g	MHz
P14		p	p	p	p	p	p	p	p	
P15		e	e	e	e	e	e	e	e	kHz
P16		n	n	n	n	n	n	n	n	REC
P17		r	r	r	r	r	r	r	r	
P18		c	c	c	c	c	c	c	c	

SHARP PARTS GUIDE

MICRO COMPONENT SYSTEM

MODEL XL-HP500

XL-HP500 Micro Component System consisting of XL-HP500 (main unit) and CP-HP500 (speaker system).

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. No.
3. PART NO.
4. DESCRIPTION

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

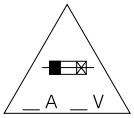
VCC ..... Ceramic type
VCK ..... Ceramic type
VCT ..... Semiconductor type
VC • • MF ..... Cylindrical type (without lead wire)
VC • • MN ..... Cylindrical type (without lead wire)
VC • • TV ..... Square type (without lead wire)
VC • • TQ ..... Square type (without lead wire)
VC • • CY ..... Square type (without lead wire)
VC • • CZ ..... Square type (without lead wire)
VC • • • • • • • • • J .. The 13th character represents capacity difference.
("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
"C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)

If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD ..... Carbon-film type
VRS ..... Carbon-film type
VRN ..... Metal-film type
VR • • MF ..... Cylindrical type (without lead wire)
VR • • MN ..... Cylindrical type (without lead wire)
VR • • TV ..... Square type (without lead wire)
VR • • TQ ..... Square type (without lead wire)
VR • • CY ..... Square type (without lead wire)
VR • • CZ ..... Square type (without lead wire)
VR • • • • • • • • • J .. The 13th character represents error.
("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.



CAUTION:FOR CONTINUED
PROTECTION AGAINST FIRE
HAZARD, REPLACE ONLY WITH
SAME TYPE F801,802 4A, 125V/
F803,804 2A, 125V FUSES.

ATTENTION:POUR ASSURER
UNE LONGUE PROTECTION CONTRE
UN INCENDIE, REMPLACER SEULEMENT
PAR UN FUSIBLE DE
TYPE F801,802 4A, 125V/
F803,804 2A, 125V FUSES.

NOTE:
Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
INTEGRATED CIRCUITS				
IC1	VHILC78646E-1	J	AY	CD Servo,LC78646E
IC2	VHIM63001FP-1	J	AX	Focus/Tracking/Spin/Sled Driver, M63001FP
IC101	VHIAN7345K/-1	J	AM	Playback and Record/Playback Amp.,AN7345K
IC301	VHITA7358AP-1	J	AG	FM Front End,TA7358AP
IC302	VHILC72131/-1	J	AP	PLL (Tuner),LC72131
IC303	VHILA1832S/-1	J	AN	FM IF Det./FM Mpx./AM IF, LA1832S
IC601	VHILC75341/-1	J	AM	Audio Processor,LC75341
IC701	RH-IX0574AWZZ	J	AX	System Microcomputer, IX0574AW (To Serial No.21100500) [For Canada]
IC701	RH-IX0574AWZZ	J	AX	System Microcomputer, IX0574AW (To Serial No.21104113) [Except for Canada]
IC701	RH-IX0578AWZZ	J	AX	System Microcomputer, IX0578AW (From Serial No.21200501) [For Canada]
IC701	RH-IX0578AWZZ	J	AX	System Microcomputer, IX0578AW (From Serial No.21204118) [Except for Canada]
IC851	VHIKIA7812AP1	J	AF	Constant Voltage Regulator, KIA7812AP
IC852	VHIKIA7810AP1	J	AF	Constant Voltage Regulator, KIA7810AP
IC853	VHIKIA7805AP1	J	AF	Constant Voltage Regulator, KIA7805AP
IC854	VHIAN78L05/-1	J	AE	Constant Voltage Regulator, AN78L05
IC901	VHISTK40271-1	J	AZ	Power Amp.,STK402-071
TRANSISTORS				
IC855	VSKTC2026//-1	J	AF	Silicon,NPN,KTC2026
Q1	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q2	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
Q101~104	VS2SC1845F/-1	J	AC	Silicon,NPN,2SC1845 F
Q105~108	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q109	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q110	VSKRC104M//-1	J	AC	Digital,NPN,KRC104 M
Q111	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
Q112	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q113,114	VSKRC104M//-1	J	AC	Digital,NPN,KRC104 M
Q302	VSKTC3194Y/-1	J	AD	Silicon,NPN,KTC3194 Y
Q360,361	VSKTA1266GR-1	J	AB	Silicon,PNP,KTA1266 GR
Q500	VSKTA1273Y/-1	J	AE	Silicon,PNP,KTA1273 Y
Q501	VSKTA1271Y/-1	J	AC	Silicon,PNP,KTA1271 Y
Q601~604	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q701	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q702	VSKRC102M//-1	J	AC	Digital,NPN,KRC102 M
Q801	VSKTA1274Y/-1	J	AE	Silicon,PNP,KTA1274 Y
Q841	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q901~905	VSKTC3199GR-1	J	AB	Silicon,NPN,KTC3199 GR
Q906	VSKTC3203Y/-1	J	AC	Silicon,NPN,KTC3203 Y
DIODES				
D301~305	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D500	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D701	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D703	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D705~709	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D802	VHDD3SBA60F-1	J	AG	Silicon,D3SBA60F
D803~806	VHDGD1N4004-1	J	AB	Silicon,GD1N4004
D842~845	VHDGD1N4004-1	J	AB	Silicon,GD1N4004
D846	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D851~853	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D855~859	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D860	VHDGD1N4004-1	J	AB	Silicon,GD1N4004
D905~907	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
D911,912	VHDDS1SS133-1	J	AB	Silicon,DS1SS133
LED701	VHPSLR342VCJ1	J	AC	LED,Red,SLR342VC
VD301	VHCSVC348S/-1	J	AK	Variable Capacitance,SVC348S
VD302,303	VHCSVC211C/-1	J	AG	Silicon,SVC211C,Variable Cap
ZD1	VHEDZ3R3BSB-1	J	AB	Zener,3.3V,DZ3.3BSB
ZD2	VHEDZ3R9BSB-1	J	AC	Zener,3.9V,DZ3.9BSB
ZD351	VHEDZ5R1BSB-1	J	AC	Zener,5.1V,DZ5.1BSB
ZD801	VHEDZ6R2BSA-1	J	AB	Zener,6.2V,DZ6.2BSA
ZD803	VHEDZ300BSB-1	J	AB	Zener,30V,DZ300BSB
ZD852	VHEDZ9R1BSB-1	J	AB	Zener,9.1V,DZ9.1BSB
FILTERS				
BF301	RFILR0008AWZZ	J	AE	Band Pass Filter
CF302	RFILF0124AFZZ	J	AD	FM IF
CF351	RFILF0003AWZZ	J	AK	FM IF
CF352	RFILA0009AWZZ	J	AE	AM IF
TRANSFORMERS				
⚠ PT801	RTRNP0452AWZZ	J	BC	Power (Main)
⚠ PT841	RTRNP0483AWZZ	J	AL	Power (Sub)
T301	RCILB0065AWZZ	J	AC	OSC,FM
T302	RCILI0017AWZZ	J	AB	FM IF
T303	RCILA0052AWZZ	J	AE	AM Antenna
T306	RCILB0067AWZZ	J	AD	AM OSC
T351	RCILI0019AWZZ	J	AD	AM IF
COILS				
L1	VP-XHR82K0000	J	AC	0.82 µH
L103	VP-MK331K0000	J	AB	330 µH,Choke
L312	RCILR0056AWZZ	J	AB	FM RF
L351,352	VP-DH101K0000	J	AB	100 µH,Choke
L701	VP-DH101K0000	J	AB	100 µH,Choke
VIBRATORS				
X351	92LCRSTL1425A	J	AF	Crystal,456 kHz
X352	RCRSP0019AWZZ	J	AF	Crystal,4.5 MHz
XL1	RCRM-0047AWZZ	J	AE	Ceramic,16.9344 MHz
XL700	RCRSP0003AWZZ	J	AH	Crystal,4.19403 MHz
CAPACITORS				
C1	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C2	VCTYMN1CY103N	J	AA	0.01 µF,16V
C3	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C4	VCKYMN1HB102K	J	AA	0.001 µF,50V
C5	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
C6	VCTYPA1CX104K	J	AB	0.1 µF,16V
C8	VCTYMN1CX272K	J	AA	0.0027 µF,16V
C9	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C10	VCEAZA1HW106M	J	AB	10 µF,50V,Electrolytic
C11	VCEAZA1HW224M	J	AB	0.22 µF,50V,Electrolytic
C12	VCKYMN1HB101K	J	AA	100 pF,50V
C13	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C14	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C16	VCEAZA0JW337M	J	AC	330 µF,6.3V,Electrolytic
C18	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C19	RC-EZ0004AWZZ	J	AD	3.3 µF,16V,Electrolytic
C22	VCTYMN1CY103N	J	AA	0.01 µF,16V
C23,24	VCEAZA1HW106M	J	AB	10 µF,50V,Electrolytic
C25,26	VCQYKA1HM152K	J	AB	0.0015 µF,50V,Mylar
C27	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C28	VCKYMN1HB101K	J	AA	100 pF,50V
C30	VCKYMN1HB101K	J	AA	100 pF,50V
C32	VCKYMN1HB101K	J	AA	100 pF,50V
C33	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C34	VCKYMN1HB101K	J	AA	100 pF,50V
C35	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
C36	VCEAZA1HW224M	J	AB	0.22 µF,50V,Electrolytic
C37	VCTYPA1CX104K	J	AB	0.1 µF,16V
C38	VCTYMN1CY103N	J	AA	0.01 µF,16V
C39	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C40	VCEAZA0JW227M	J	AC	220 µF,6.3V,Electrolytic
C41	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C42	VCTYMN1CY103N	J	AA	0.01 µF,16V
C43	VCEAZA1AW107M	J	AB	100 µF,10V,Electrolytic
C44	VCKYMN1HB102K	J	AA	0.001 µF,50V
C48	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C50	VCCCMN1HH220J	J	AA	22 pF (CH),50V
C51	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C52,53	VCKYMN1HB102K	J	AA	0.001 µF,50V

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
C54,55	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C59	VCTYPA1CX103K	J	AA	0.01 µF,16V
C103,104	VCKYMN1HB181K	J	AA	180 pF,50V
C105,106	VCKYMN1HB561K	J	AA	560 pF,50V
C109,110	VCKYMN1HB331K	J	AA	330 pF,50V
C111,112	RC-EZY107AF1C	J	AB	100 µF,16V,Electrolytic
C113,114	VCTYPA1EX333K	J	AA	0.033 µF,25V
C115,116	VCKYMN1HB561K	J	AA	560 pF,50V
C117,118	RC-EZY476AF1E	J	AB	47 µF,25V,Electrolytic
C121	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C123,124	VCKYMN1HB271K	J	AA	270 pF,50V
C125,126	RC-EZY226AF1C	J	AB	22 µF,16V,Electrolytic
C127,128	VCTYPA1CX223K	J	AA	0.022 µF,16V
C129,130	VCTYMN1CX332K	J	AA	0.0033 µF,16V
C131,132	RC-EZY476AF1E	J	AB	47 µF,25V,Electrolytic
C133	RC-EZY226AF1C	J	AB	22 µF,16V,Electrolytic
C134	RC-EZY227AF1A	J	AB	220 µF,10V,Electrolytic
C135	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C137	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
C138	VCQPKA2AA822J	J	AA	0.0082 µF,100V,Polypropylene
C139	VCQYKA1HM393K	J	AB	0.039 µF,50V,Mylar
C140	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C141	RC-EZY107AF1C	J	AB	100 µF,16V,Electrolytic
C143	RC-EZY335AF1H	J	AB	3.3 µF,50V,Electrolytic
C302	VCKYMN1HB102K	J	AA	0.001 µF,50V
C303	VCCCMN1HH100J	J	AA	10 pF (CH),50V
C304	VCTYMN1CY103N	J	AA	0.01 µF,16V
C305	VCCCMN1HH4R7C	J	AA	4.7 pF (CH),50V
C306	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C307	RC-EZY106AF1C	J	AB	10 µF,16V,Electrolytic
C308	VCCCMN1HH4R7C	J	AA	4.7 pF (CH),50V
C309	VCKYMN1HB102K	J	AA	0.001 µF,50V
C310	VCCCMN1HH150J	J	AA	15 pF (CH),50V
C311	VCCSMN1HL180J	J	AA	18 pF,50V
C312	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C313	VCCCMN1HH220J	J	AA	22 pF (CH),50V
C314,315	VCTYMN1CX472K	J	AA	0.0047 µF,16V
C316	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C317	VCKYMN1HB102K	J	AA	0.001 µF,50V
C318	VCKYMN1HB101K	J	AA	100 pF,50V
C322	VCKYPA1HB101K	J	AA	100 pF,50V
C323	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C324	VCCUMN1HJ4R7D	J	AA	4.7 pF (UJ),50V
C330	VCCUMN1HJ150J	J	AA	15 pF (UJ),50V
C331	VCKYPA1HF473Z	J	AB	0.047 µF,50V
C332	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C334	VCCUMN1HJ220J	J	AA	22 pF (UJ),50V
C335	VCKYMN1HB561K	J	AA	560 pF,50V
C338	VCKYMN1HB102K	J	AA	0.001 µF,50V
C342	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C350	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C351	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C352	RC-EZY106AF1C	J	AB	10 µF,16V,Electrolytic
C353,354	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C355	VCCSMN1HL220J	J	AA	22 pF,50V
C356	VCKYMN1HB102K	J	AA	0.001 µF,50V
C357	RC-EZY225AF1H	J	AB	2.2 µF,50V,Electrolytic
C358	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C361	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C362	VCEAZA1HW335M	J	AB	3.3 µF,50V,Electrolytic
C363	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C364	VCEAZA1HW225M	J	AB	2.2 µF,50V,Electrolytic
C365	VCKYPA1HF223Z	J	AB	0.022 µF,50V
C366	VCKYMN1HB102K	J	AA	0.001 µF,50V
C367,368	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C369	VCCUMN1HJ270J	J	AA	27 pF (UJ),50V
C370~372	VCEAZA1HW105M	J	AB	1 µF,50V,Electrolytic
C373,374	VCTYPA1CX273K	J	AA	0.027 µF,16V
C380	RC-EZY106AF1C	J	AB	10 µF,16V,Electrolytic
C381	VCCCMN1HH120J	J	AA	12 pF (CH),50V
C382	VCCCMN1HH150J	J	AA	15 pF (CH),50V
C384	VCKYMN1HB102K	J	AA	0.001 µF,50V
C385	VCTYMN1CY103N	J	AA	0.01 µF,16V
C386	VCKYMN1HB331K	J	AA	330 pF,50V
C387	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C388	VCKYMN1HB102K	J	AA	0.001 µF,50V
C389	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C390	VCKYBT1HB101K	J	AA	100 pF,50V
C391	RC-EZY476AF1C	J	AB	47 µF,16V,Electrolytic
C392	VCKYMN1HB102K	J	AA	0.001 µF,50V
C393	VCKYPA1HB121K	J	AA	120 pF,50V
C394	RC-EZY476AF1C	J	AB	47 µF,16V,Electrolytic

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C395	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C396	RC-EZY107AF1A	J	AB	100 µF,10V,Electrolytic
C397	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C398	RC-EZY107AF1A	J	AB	100 µF,10V,Electrolytic
C399	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C502	RC-EZY476AF1E	J	AB	47 µF,25V,Electrolytic
C601	RC-EZY227AF1C	J	AC	220 µF,16V,Electrolytic
C602	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C603	RC-EZY226AF1C	J	AB	22 µF,16V,Electrolytic
C605~608	VCFYDA1HA154J	J	AB	0.15 µF,50V,Polyester
C609,610	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C611,612	VCTYMN1CX222K	J	AA	0.0022 µF,16V
C613,614	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C615,616	RC-EZY475AF1H	J	AB	4.7 µF,50V,Electrolytic
C617~624	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C625,626	VCKYMN1HB101K	J	AA	100 pF,50V
C631,632	VCTYMN1CX222K	J	AA	0.0022 µF,16V
C635~638	VCKYMN1HB102K	J	AA	0.001 µF,50V
C639	VCEAZA1HW225M	J	AB	2.2 µF,50V,Electrolytic
C640	VCEAZA1HW226M	J	AB	22 µF,50V,Electrolytic
C641~643	VCKYPA1HB102K	J	AA	0.001 µF,50V
C651~653	VCKYMN1HB221K	J	AA	220 pF,50V
C690,691	VCKYMN1HB391K	J	AA	390 pF,50V
C700	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C701	RC-EZY227AF1A	J	AB	220 µF,10V,Electrolytic
C702	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C703	VCCSMN1HL150J	J	AA	15 pF,50V
C704	VCCSMN1HL180J	J	AA	18 pF,50V
C705	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C706	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C707	RC-EZY105AF1H	J	AB	1 µF,50V,Electrolytic
C708~717	VCKYMN1HB102K	J	AA	0.001 µF,50V
C718	VCTYMN1CY103N	J	AA	0.01 µF,16V
C719	VCEAZA1HW335M	J	AB	3.3 µF,50V,Electrolytic
C720	VCTYMN1EF223Z	J	AA	0.022 µF,25V
C721	RC-EZY476AF1E	J	AB	47 µF,25V,Electrolytic
C722	VCKYMN1HB151K	J	AA	150 pF,50V
C801	VCEAZA1VW107M	J	AC	100 µF,35V,Electrolytic
C802,803	VCEAZA1HW476M	J	AB	47 µF,50V,Electrolytic
C804	VCEAZA1JW227M	J	AD	220 µF,63V,Electrolytic
C805	VCEAZA2AW226M	J	AC	22 µF,50V,Electrolytic
C806~809	VCFYHA1HA104J	J	AB	0.1 µF,100V,Thin Film
C841	VCEAZA0JW108M	J	AC	1000 µF,6.3V,Electrolytic
C842	VCEAZA1VW477M	J	AD	470 µF,35V,Electrolytic
C843	VCQYKA1HM473K	J	AB	0.047 µF,50V,Mylar
⚠ C844	RC-KZ002LAWZZ	J	AC	0.0047 µF,250V,Ceramic
C851	VCKYPA1HF473Z	J	AB	0.047 µF,50V
C852	VCEAZA1HW226M	J	AB	22 µF,50V,Electrolytic
C853	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C854,855	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C856	VCEAZW1VW338M	J	AH	3300 µF,35V,Electrolytic
C857	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C858,859	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C860	VCEAZA1EW476M	J	AB	47 µF,25V,Electrolytic
C861	VCKYPA1HF473Z	J	AB	0.047 µF,50V
C862	VCEAZA1HW106M	J	AB	10 µF,50V,Electrolytic
C863	VCEAZA1HW226M	J	AB	22 µF,50V,Electrolytic
C864	VCQYKA1HM104K	J	AB	0.1 µF,50V,Mylar
C865	VCEAZA1HW106M	J	AB	10 µF,50V,Electrolytic
C901,902	VCEAZA1HW224M	J	AB	0.22 µF,50V,Electrolytic
C903,904	VCKYPA1HB102K	J	AA	0.001 µF,50V
C905,906	VCCSPA1HL3R0C	J	AA	3 pF,50V
C907,908	VCKYMN1HB471K	J	AA	470 pF,50V
C909,910	VCEAZA1CW226M	J	AC	22 µF,16V,Electrolytic
C911,912	VCQYKA1HM223K	J	AB	0.022 µF,50V,Mylar
C913,914	VCEAZA1JW107M	J	AC	100 µF,63V,Electrolytic
C915,916	VCEAZA1JW106M	J	AB	10 µF,63V,Electrolytic
C925	VCEAZA1HW476M	J	AB	47 µF,50V,Electrolytic
C926~929	VCFYHA1HA224J	J	AC	0.22 µF,50V,Thin Film
C930	VCEAZA1HW476M	J	AB	47 µF,50V,Electrolytic
C931	VCEAZA1HW106M	J	AB	10 µF,50V,Electrolytic
C932	VCFYHA1HA224J	J	AC	0.22 µF,50V,Thin Film
C948,949	RC-EZ0104AWZZ	J	AH	2200 µF,50V,Electrolytic
C960	VCEAZA1EW335M	J	AB	3.3 µF,25V,Electrolytic

RESISTORS

	VRD-MN2BD000C	J	AA	0 ohm,Jumper,ø1.4×3.5mm,Ivory
R1,2	VRD-MN2BD822J	J	AA	8.2 kohms,1/8W
R3	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R4,5	VRD-MN2BD822J	J	AA	8.2 kohms,1/8W
R6	VRD-MN2BD223J	J	AA	22 kohms,1/8W

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
R7	VRD-ST2CD470J	J	AA	47 ohms,1/6W
R9	VRD-MN2BD100J	J	AA	10 ohm,1/8W
R10	VRD-ST2CD273J	J	AA	27 kohms,1/6W
R11	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R12	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R13~16	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R18	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R20	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R22	VRD-ST2CD101J	J	AA	100 ohm,1/6W
R23	VRD-MN2BD221J	J	AA	220 ohms,1/8W
R24,25	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R26,27	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R28,29	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R30,31	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R32~38	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R39,40	VRD-MN2BD681J	J	AA	680 ohms,1/8W
R41	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R42	VRD-MN2BD122J	J	AA	1.2 kohms,1/8W
R43	VRD-MN2BD221J	J	AA	220 ohms,1/8W
R44	VRD-ST2CD123J	J	AA	12 kohms,1/6W
R45,46	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
R47	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R49,50	VRD-ST2EE1R0J	J	AA	1 ohm,1/4W
⚠ R51	VRG-ST2EG3R3J	J	AB	3.3 ohms,1/4W,Fusible
R52	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R103,104	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R105,106	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R107,108	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R109,110	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R111,112	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R113	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R114	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R115	VRD-ST2CD560J	J	AA	56 ohms,1/6W
R116	VRD-MN2BD560J	J	AA	56 ohms,1/8W
R117,118	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R119,120	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R121,122	VRD-MN2BD123J	J	AA	12 kohms,1/8W
R123,124	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R126,127	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R128,129	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R130,131	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R132,133	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R134,135	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R136,137	VRD-ST2CD224J	J	AA	220 kohms,1/6W
R138	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R139	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R140	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R141	VRD-ST2CD472J	J	AA	4.7 kohms,1/6W
R142	VRD-RT2HD820J	J	AA	82 ohms,1/2W
R143	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R144	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R145	VRD-ST2CD4R7J	J	AA	4.7 ohms,1/6W
R146,147	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R148	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R149	VRD-ST2EE151J	J	AA	150 ohms,1/4W
R150	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R158	VRD-ST2EE221J	J	AA	220 ohms,1/4W
R302	VRD-MN2BD100J	J	AA	10 ohm,1/8W
R309	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R311	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R313	VRD-MN2BD333J	J	AA	33 kohms,1/8W
R314	VRD-ST2CD220J	J	AA	22 ohms,1/6W
R316	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R322	VRD-MN2BD681J	J	AA	680 ohms,1/8W
R323	VRD-MN2BD683J	J	AA	68 kohms,1/8W
R325	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R327	VRD-MN2BD330J	J	AA	33 ohms,1/8W
R336	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R350	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
R351	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R352	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R353	VRD-MN2BD271J	J	AA	270 ohms,1/8W
R355	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R356	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R357	VRD-ST2CD474J	J	AA	470 kohms,1/6W
R358	VRD-ST2CD392J	J	AA	3.9 kohms,1/6W
R359	VRD-MN2BD182J	J	AA	1.8 kohms,1/8W
R360	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R361,362	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R363,364	VRD-MN2BD393J	J	AA	3.9 kohms,1/8W
R365	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R372~374	VRD-MN2BD102J	J	AA	1 kohm,1/8W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
R375	VRD-ST2CD471J	J	AA	470 ohms,1/6W
R376	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R377	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R378	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R379	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R380	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
R381	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R382	VRD-ST2EE151J	J	AA	150 ohms,1/4W
R383	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R384	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R385	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R386	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R387	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R388	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
R390	VRD-ST2CD823J	J	AA	82 kohms,1/6W
R391,392	VRD-ST2EE271J	J	AA	270 ohms,1/4W
R393	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R395	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R504	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R505	VRD-MN2BD822J	J	AA	8.2 kohms,1/8W
R506,507	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R601	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R602	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R603	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R604,605	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R606,607	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R608,609	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R610,611	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R612	VRD-MN2BD391J	J	AA	390 ohms,1/8W
R613	VRD-ST2CD391J	J	AA	390 ohms,1/6W
R614,615	VRD-MN2BD332J	J	AA	3.3 kohms,1/8W
R616,617	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R618,619	VRD-MN2BD331J	J	AA	330 ohms,1/8W
R620,621	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R641,642	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R645,646	VRD-ST2CD183J	J	AA	18 kohms,1/6W
R690,691	VRD-MN2BD682J	J	AA	6.8 kohms,1/8W
R692,693	VRD-ST2CD393J	J	AA	39 kohms,1/6W
R700	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R702~706	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R708	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R709,710	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R711	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R712,713	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R714~717	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R720,721	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R723	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R724	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R725~730	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R731	VRD-MN2BD681J	J	AA	680 ohms,1/8W
R732	VRD-ST2CD681J	J	AA	680 ohms,1/6W
R733	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
R734	VRD-MN2BD561J	J	AA	560 ohms,1/8W
R735,736	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R737	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R744	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R745	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R746	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R747	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R748~756	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R757~761	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R762	VRD-ST2CD330J	J	AA	33 ohms,1/6W
R763	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R764	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R765	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R766	VRD-ST2EE1R5J	J	AA	1.5 ohms,1/4W
R767~774	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R780,781	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R782	VRD-MN2BD472J	J	AA	4.7 kohms,1/8W
R783~786	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R787	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R789	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R790	VRD-ST2CD562J	J	AA	5.6 kohms,1/6W
R793,794	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R795	VRD-ST2EE1R5J	J	AA	1.5 ohms,1/4W
R796	VRD-MN2BD473J	J	AA	47 kohms,1/8W
R797	VRD-MN2BD104J	J	AA	100 kohm,1/8W
R798	VRD-MN2BD101J	J	AA	100 ohm,1/8W
R799	VRD-MN2BD103J	J	AA	10 kohm,1/8W
R801	VRD-ST2CD104J	J	AA	100 kohm,1/6W
R802	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R803	VRD-ST2CD123J	J	AA	12 kohms,1/6W

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
R804,805	VRD-ST2EE470J	J	AA	47 ohms,1/4W
R806	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R807	VRD-ST2EE100J	J	AA	10 ohm,1/4W
R808	VRD-RT2HD222J	J	AA	2.2 kohms,1/2W
R841	VRD-ST2CD224J	J	AA	220 kohms,1/6W
R842	VRD-ST2CD102J	J	AA	1 kohm,1/6W
R843	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R852	VRD-ST2CD103J	J	AA	10 kohm,1/6W
R853,854	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R856	VRD-RT2HD1R0J	J	AA	1 ohm,1/2W
R857	VRD-RT2HD3R3J	J	AA	3.3 ohms,1/2W
R858	VRD-ST2CD221J	J	AA	220 ohms,1/6W
R859	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R860	VRD-ST2EE221J	J	AA	220 ohms,1/4W
R901,902	VRD-ST2CD563J	J	AA	56 kohms,1/6W
R903,904	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R907,908	VRD-ST2CD563J	J	AA	56 kohms,1/6W
R909,910	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R911,912	VRD-MN2BD821J	J	AA	820 ohms,1/8W
R913,914	VRN-VV3AAR10J	J	AB	0.1 ohm,1W
R915,916	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
R917~920	VRN-VV3DAR22J	J	AC	0.22 ohms,2W
⚠ R921,922	VRG-ST2EC101J	J	AB	100 ohm,1/4W,Fusible
R923,924	VRD-MN2BD102J	J	AA	1 kohm,1/8W
R925	VRD-MN2BD223J	J	AA	22 kohms,1/8W
R926,927	VRD-ST2CD223J	J	AA	22 kohms,1/6W
R935~937	VRD-MN2BD563J	J	AA	56 kohms,1/8W
R940,941	VRD-RT2HD4R7J	J	AA	4.7 ohms,1/2W
R944,945	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
R946	VRD-ST2CD473J	J	AA	47 kohms,1/6W
R947	VRD-ST2CD153J	J	AA	15 kohms,1/6W
R949	VRD-RT2HD102J	J	AA	1 kohm,1/2W
R950	VRD-ST2CD683J	J	AA	68 kohms,1/6W
R961,962	VRD-RT2HD331J	J	AA	330 ohms,1/2W
R965,966	VRD-RT2HD822J	J	AA	8.2 kohms,1/2W
R967	VRD-RT2HD681J	J	AA	680 ohms,1/2W
RD01	VRD-MN2BD681J	J	AA	680 ohms,1/8W
RD02	VRD-MN2BD821J	J	AA	820 ohms,1/8W
RD03	VRD-MN2BD102J	J	AA	1 kohm,1/8W
RD04	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
RD05	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
RD06	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
RD07	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
RD11	VRD-MN2BD681J	J	AA	680 ohms,1/8W
RD12	VRD-MN2BD821J	J	AA	820 ohms,1/8W
RD13	VRD-ST2CD102J	J	AA	1 kohm,1/6W
RD14	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
RD15	VRD-ST2CD222J	J	AA	2.2 kohms,1/6W
RD16	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
RD17	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W
RD18	VRD-MN2BD562J	J	AA	5.6 kohms,1/8W
RD19	VRD-ST2CD681J	J	AA	680 ohms,1/6W
RD20	VRD-MN2BD821J	J	AA	820 ohms,1/8W
RD21	VRD-MN2BD102J	J	AA	1 kohm,1/8W
RD22	VRD-MN2BD152J	J	AA	1.5 kohms,1/8W
RD23	VRD-MN2BD222J	J	AA	2.2 kohms,1/8W
RD24	VRD-MN2BD272J	J	AA	2.7 kohms,1/8W
RD25	VRD-MN2BD392J	J	AA	3.9 kohms,1/8W

OTHER CIRCUITRY PARTS

BI102	QCNWN2432AWZZ	J	AL	Connector Ass'y,8/6Pin
BI706/CNS706	QCNWN2425AWZZ	J	AF	Connector Ass'y,6/5Pin
BI801/CNS801	QCNWN2393AWZZ	J	AG	Connector Ass'y,8/7Pin
BI901/CNS9	QCNWN2431AWZZ	J	AG	Connector Ass'y,9/8Pin
BIM2/CNS7	QCNWN2416AWZZ	J	AF	Connector Ass'y,5/5Pin
CNP1	QCNCM705GAFZZ	J	AB	Plug,7Pin
CNP2	QCNCM705HAFZZ	J	AB	Plug,8Pin
CNP3	92LCONE6P53253	J	AC	Plug,6Pin
CNP3A	92LCONE6P53254	J	AC	Plug,6Pin
CNP4	92LCONE4P53253	J	AB	Plug,4Pin
CNP5	QCNCWZF07AWZZ	J	AC	Socket,7Pin
CNP5A	QCNCWZY07AWZZ	J	AC	Socket,7Pin
CNP6	QCNCWZF13AWZZ	J	AC	Socket,13Pin
CNP7	92LCONE5P53253	J	AB	Plug,5Pin
CNP7A	QCNCWZY13AWZZ	J	AC	Socket,13Pin
CNP8	QCNCM705FAFZZ	J	AB	Plug,6Pin
CNP9	92LCONE8P53254	J	AC	Plug,8Pin
CNP302	92LCONE3P5268	J	AC	Plug,3Pin
CNP701A,701B	QCNCWZX16AWZZ	J	AD	Socket,16Pin
CNP706	92LCONE5P53253	J	AB	Plug,5Pin
CNP801	92LCONE7P5267X	J	AC	Plug,7Pin

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
CNP971	92LCONE2P53253	J	AB	Plug,2Pin
CNS1A/B	QCNWN0858AWZZ	J	AG	Connector Ass'y,7/7Pin
CNS2A/B	QCNWN0859AWZZ	J	AF	Connector Ass'y,8/8Pin
CNS3A/B	QCNWN2412AWZZ	J	AG	Connector Ass'y,6/6Pin
CNS4	QCNWN2414AWZZ	J	AE	Connector Ass'y,4Pin
CNS8	QCNWN2413AWZZ	J	AE	Connector Ass'y,6Pin
CNS702	QCNCWZY07AWZZ	J	AC	Socket,7Pin
CNS971	QCNWN1389AWZZ	J	AC	Connector Ass'y,2Pin
⚠ F801,802	QFS-D402DAWNI	J	AC	Fuse,4A,125V
⚠ F803,804	QFS-D202DAWNI	J	AC	Fuse,2A,125V
FC5	QCNWN2395AWZZ	J	AD	Flat Cable,7Pin
FC6	QCNWN2397AWZZ	J	AF	Flat Cable,13Pin
FC701	QCNWN2409AWZZ	J	AF	Flat Cable,16Pin
FC702	QCNWN2394AWZZ	J	AE	Flat Cable,7Pin
FL701	VVKNA10SS23-1	J	AW	FL Display
FW804	QCNWN2508AWZZ	J		Flat Wire,4Pin
FW804A/B	QCNCW015DAWZZ	J	AB	Holder,Flat Cable
FW902	QCNWN2392AWZZ	J	AC	Flat Wire,5Pin
FW903	QCNWN2447AWZZ	J	AB	Flat Wire,3Pin
HD902	QCNCW019EAWZZ	J	AB	Holder,Flat Wire,5Pin
HD903	QCNCW019CAWZZ	J	AB	Holder,Flat Wire,3Pin
JK690	QSOCJ0224AWZZ	J	AC	Jack,Video/AUX
JK951	QJAKM0004AWZZ	J	AK	Jack,Headphones
JK953	QSOCJ0111AWZZ	J	AD	Sub Woofer Output
M1	92LMTR2996CASY	J	AS	Motor with Chassis [Spindle]
M2	92LMTR1854BASY	J	AP	Motor with Gear [Sled]
M971(212-3)	RMOTV0027AWZZ	J	AM	Motor,Air Cooling Fan
MOB1	92LMTR2395DASY	J	AQ	Main Cam Motor Ass'y
MOB2	92LMTR2395DASY	J	AQ	Tray Motor Ass'y
⚠ RL841	RRLYD0018AWZZ	J	AH	Relay
⚠ RL914	RRLYD0014AWZZ	J	AK	Relay
RX701	VHLGP1UM271-1	J	AH	Remote Sensor,GP1UM271
SO901	QTANA0424AWZZ	J	AE	Terminal,Speaker
SW4	QSW-F9001AW01	J	AD	Switch,Leaf Type [PICKUP IN]
SW701	92LSWICHT1663T	J	AC	Switch,Key Type [POWER ON/STAND BY]
SW702	92LSWICHT1663T	J	AC	Switch,Key Type [CLOCK]
SW703	92LSWICHT1663T	J	AC	Switch,Key Type [TIMER/SLEEP]
SW704	92LSWICHT1663T	J	AC	Switch,Key Type [TUNING/TIME UP]
SW705	92LSWICHT1663T	J	AC	Switch,Key Type [TUNING/TIME DOWN]
SW706	92LSWICHT1663T	J	AC	Switch,Key Type [REC/PAUSE]
SW707	92LSWICHT1663T	J	AC	Switch,Key Type [REVERSE MODE]
SW708	92LSWICHT1663T	J	AC	Switch,Key Type [MEMORY/SET]
SW712	92LSWICHT1663T	J	AC	Switch,Key Type [PRESET UP]
SW713	92LSWICHT1663T	J	AC	Switch,Key Type [PRESET DOWN]
SW714	92LSWICHT1663T	J	AC	Switch,Key Type [PLAY]
SW715	92LSWICHT1663T	J	AC	Switch,Key Type [STOP]
SW716	92LSWICHT1663T	J	AC	Switch,Key Type [REVERSE PLAY]
SW717	92LSWICHT1663T	J	AC	Switch,Key Type [CD]
SW718	92LSWICHT1663T	J	AC	Switch,Key Type [TUNER (BAND)]
SW719	92LSWICHT1663T	J	AC	Switch,Key Type [TAPE]
SW720	92LSWICHT1663T	J	AC	Switch,Key Type [VIDEO/AUX]
SW721	92LSWICHT1663T	J	AC	Switch,Key Type [DISC 3 EJECT]
SW722	92LSWICHT1663T	J	AC	Switch,Key Type [DISC 2 EJECT]
SW723	92LSWICHT1663T	J	AC	Switch,Key Type [DISC 1 EJECT]
SW724	92LSWICHT1663T	J	AC	Switch,Key Type [DISC 1]
SW725	92LSWICHT1663T	J	AC	Switch,Key Type [DISC 2]
SW726	92LSWICHT1663T	J	AC	Switch,Key Type [DISC 3]
SW727	92LSWICHT1663T	J	AC	Switch,Key Type [EQUALIZER]
SW728	92LSWICHT1663T	J	AC	Switch,Key Type [X-BASS/DEMO]
SWB101/102	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [CAM1,2]
SWB103/104	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [CAM3,4]
SWB105	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD EJECT]
SWB106	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD TRAY CLOSE]
SWB107	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD IN]
SWB108	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD SET]
VR701	QSW-Z0013AWZZ	J	AF	Switch,Push Type [VOLUME]
WT902	QCNCW012EAWZZ	J	AC	Socket,5Pin
WT904	QCNCW012CAWZZ	J	AC	Socket,3Pin

CD MECHANISM PARTS

301	NGERH0011AWZZ	J	AC	Gear,Middle
302	NGERH0012AWZZ	J	AC	Gear,Drive

NO.	PART CODE	★	PRICE RANK	DESCRIPTION
303	MLEVP0080AWZZ	J	AC	Rail,Guide
304	NSFTM0020AWFW	J	AD	Shaft,Guide
305	92LMCUSN1524A	J	AD	Cushion
⚠ 306	92LHPC1LXASY	J	BD	Pickup Unit Ass'y
306- 1	————		—	Pickup Unit (Not Replacement Item)
306- 2	NGERR0043AFZZ	J	AC	Gear,Rack
306- 3	MSPRC0961AFZZ	J	AA	Spring,Rack
307	PCUSG0001AWSA	J	AD	Cushion
308	PCUSG0004AWSA	J	AD	Cushion
701	XBSSD26P06000	J	AA	Screw,ø2.6×6mm
702	XHBSD20P05000	J	AA	Screw,ø2×5mm
703	XBBSD20P03000	J	AA	Screw,ø2×3mm
704	LX-WZ1070AFZZ	J	AA	Washer,ø1.5×ø3.8×0.25mm
M1	92LMTR2996CASY	J	AS	Motor with Chassis [Spindle]
M2	92LMTR1854BASY	J	AP	Motor with Gear [Sled]
SW4	QSW-F9001AW01	J	AD	Switch,Leaf Type [Pickup In]

CHANGER MECHANISM PARTS

101	GCOVA1152AWZZ	J	AL	Tray,Disc Guide
102	GCOVA1153AWZZ	J	AF	Tray,Disc
103	LANGF0024AWZZ	J	AE	Top Board
104	LANGF0025AWZZ	J	AB	Bracket,Switch
106	LANGF0028AWZZ	J	AB	Bracket,Mecha Holder
107	LANGK0169AWZZ	J	AF	Stopper
108	LCHSM0037AWZZ	J	AP	Main Base
109	LCHSM0038AWZZ	J	AK	Changer Box
110	LHLDM1008AWZZ	J	AD	Stabilizer
111	MCAMP0127AFZZ	J	AR	Main Cam
112	MLEVP0052AWZZ	J	AC	Lever,Tray Change
113	MLEVP0053AWZZ	J	AC	Lever,Top Joint
114	MLEVP0054AWZZ	J	AC	Lever,Midle Joint
115	MLEVP0055AWZZ	J	AC	Lever,Bottom Joint
116	MLEVP0056AWZZ	J	AC	Lever,Front Switch
117	MLEVP0057AWM1	J	AC	Lever,Rear Switch Ass'y
118	MLEVP0058AWZZ	J	AB	Lever,Tray Lock
119	MSPRD0078AWFJ	J	AB	Spring,Tray Switch
120	MSPRD0079AWFJ	J	AB	Spring,Disc Top
121	MSPRD0080AWFJ	J	AB	Spring,Tray Lock Lever
122	NBLTK0027AWZZ	J	AB	Belt,Cam Drive
124	NGERH0052AWZZ	J	AC	Gear,Idler
125	NGERH0053AWZZ	J	AB	Gear,Cam
126	NGERH0054AWZZ	J	AB	Gear,Midle
127	NGERH0055AWZZ	J	AC	Gear,Center
128	NGERH0056AWZZ	J	AB	Gear,Center Tray
129	NGERH0057AWZZ	J	AB	Gear,Tray Idler
130	NGERH0058AWZZ	J	AB	Gear,Tray Drive
131	NPLYR0004AWZZ	J	AC	Pulley,Drive
132	NROLP0007AWZZ	J	AB	Rollar,Cam Guide
133	NSFTL0001AWZZ	J	AB	Shaft,Tray Change
134	PGIDM0017AWZZ	J	AC	Guide,Mecha Holder
135	PGIDM0018AWZZ	J	AF	Holder,Mecha
136	PGIDM0019AWZZ	J	AE	Stabilizer Holder
137	PGUMS0016AWZZ	J	AB	Tray Rubber
138	PMAGF0001AWZZ	J	AF	Magnet
139	92LNBAND1318A	J	AA	Nylon Band,80mm
140	MSPRD0184AWFJ	J	AB	Spring,Tray Switch B
801	LX-EZ0005AWFD	J	AA	Screw,Special
802	XBPSD26P04000	J	AA	Screw,ø2.6×4mm
803	XBPSD30P03000	J	AA	Screw,ø3×3mm
804	XEBSD20P06000	J	AA	Screw,ø2×6mm
805	XEBSD20P07000	J	AB	Screw,ø2×7mm
806	XEBSD26P12000	J	AA	Screw,ø2.6×12mm
MOB1	92LMTR2395DASY	J	AQ	Main Cam Motor Ass'y
MOB2	92LMTR2395DASY	J	AQ	Tray Motor Ass'y
SWB101/102	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [CAM1,2]
SWB103/104	QSW-F0353AFZZ	J	AD	Switch,Leaf Type [CAM3,4]
SWB105	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD EJECT]
SWB106	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD TRAY CLOSE]
SWB107	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD IN]
SWB108	QSW-P0920AFZZ	J	AC	Switch,Push Type [CD SET]

CABINET PARTS

201	92LCAB4763AASY	J	BB	Front Panel Ass'y
201- 1	————		—	Front Panel (Not Replacement Item)
201- 2	GCOVA1364AWSA	J	AB	Indicator,Timer
201- 3	GCOVA1460AWSA	J	AC	Cover,Sensor
201- 4	GCOVA1461AWSA	J	AK	Panel,Cassette Cover
201- 5	GDORF0117AWSA	J	AF	Holder,Cassette
201- 6	HBDGB1001AWSA	J	AD	Badge,SHARP
201- 7	HDECQ0936AWSA	J	AG	Panel,FL Display
201- 8	HDECQ0937AWSA	J	AD	Window,Cassette
201- 9	HDECZ0026AWSA	J	AP	Decoration Panel
201-10	JKNBZ0904AWSB	J	AF	Button,Function
201-11	JKNBZ0905AWSA	J	AF	Button,ON/STAND-BY
201-12	JKNBZ0906AWSA	J	AG	Button,Disc Select
201-13	JKNBZ0907AWSA	J	AG	Button,Play/Stop
201-14	JKNBZ0908AWSA	J	AF	Button,X-Bass
201-16	LHLDZ9008AWSA	J	AC	Spacer,Button
201-17	MLIFP0008AWZZ	J	AD	Damper
201-18	MSPRD0180AWFJ	J	AB	Spring,Cassette
201-19	QCNWN1860AWZZ	J	AC	Lead Wire with Lug
202	92LCAB4782BASY	J	AP	Side Panel Ass'y ,Left
202- 1	————		—	Side Panel Ass'y,Left (Not Replacement Item)
202- 2	PCUSG0022AWZZ	J	AB	Cushion,Leg
203	92LCAB4782CASY	J	AP	Side Panel Ass'y ,Right
203- 1	————		—	Side Panel Ass'y,Right (Not Replacement Item)
203- 2	PCUSG0022AWZZ	J	AB	Cushion,Leg
204	GCAB-1223AWSA	J	AS	Cabinet,Top
205	GCOVA1456AWSA	J	AH	CD 1 Tray Cover
206	GCOVA1457AWSA	J	AH	CD 2 Tray Cover
207	GCOVA1458AWSA	J	AH	CD 3 Tray Cover
208	GITAR1123AWSA	J	AM	Rear Panel [Except for Canada]
208	GITAR1124AWSA	J		Rear Panel [For Canada]
209	JKNBK0093AWSA	J	AK	Knob,VOLUME
210	KMECB0031AWZZ	J	BD	Tape Mechanism Ass'y
210- 1	92LF513-891	J	BG	Head Plate Block
210- 2	92LF525-345	J	BE	Motor with Pulley
210- 3	92LF567-716	J	AZ	Tape Mechanism PWB Ass'y
210- 4	92LF522-063	J	AZ	Clutch Ass'y Block
210- 5	92LFF19U-31	J	AL	Belt,Main
210- 6	92LF514-133	J	AL	Pinch Roller Block,Right
210- 7	92LF514-134	J	AL	Pinch Roller Block,Left
210- 8	92LFF19S-31	J	AL	Belt,FF/REW
211	LANGK0111AWFW	J	AE	Bracket,Cassette Lock Lever
212	92LFAN4751ASY1	J	AQ	Fan Motor Ass'y
212- 1	LANGK0316AWFW	J	AE	Bracket,Fan Motor
212- 2	NFANP0001AWZZ	J	AD	Rotary,Fan
212- 3(M971)	RMOTV0027AWZZ	J	AM	Motor,Air Cooling Fan
212- 4	92LCSPR1431C	J	AA	Spring,Ring
⚠ 213	LBSHC0005AWZZ	J	AD	Bushing,AC Power Supply Cord
214	LCHSM0164AWFW	J	AP	Chassis,Main
215	LCHSZ0022AWZZ	J	AN	Chassis,Changer Unit
216	LHLDZ1439AWZZ	J	AE	Holder,FL Display
217	MLOKC0004AWZZ	J	AD	Lock Lever,Cassette
218	MSPRD0110AWFJ	J	AB	Spring,Cassette Lock Lever
221	PCUSG0022AWZZ	J	AB	Cushion,Leg
222	PRDAR0255AWFW	J	AV	Heat Sink,Main
225	92LRDAT1468B	J	AE	Heat Sink,Sub
⚠ 226	QACCD0022AWZZ	J	AM	AC Power Supply Cord
227	QCNWN1844AWZZ	J	AC	Lead Wire with Lug
⚠ 228	QFSHD0001AWZZ	J	AB	Holder,Fuse
229	QLUGP0001AWZZ	J	AC	Lug (LUG902,903)
231	92LCSPR1431C	J	AA	Spring,Ring
232	92LNBAND1318A	J	AA	Nylon Band,80mm
601	LX-BZ2222AXZZ	J	AB	Screw,Special
602	LX-HZ0009AWFD	J	AC	Screw,Special
603	LX-JZ0010AFFD	J	AA	Screw,ø3×10mm
604	LX-JZ0036AWFD	J	AB	Screw,Special
605	LX-JZ0037AWFD	J	AB	Screw,ø3×12mm
606	XBBSD20P04000	J	AA	Screw,ø2×4mm
607	XEBSD26P10000	J	AA	Screw,ø2.6×10mm
608	XEBSD30P10000	J	AA	Screw,ø3×10mm
609	XEBSD30P12000	J	AA	Screw,ø3×12mm
610	XESSD30P10000	J	AA	Screw,ø3×10mm
611	XHBSD26P04000	J	AA	Screw,ø2.6×4mm
612	XHBSD40P08000	J	AA	Screw,ø4×8mm
613	XJBSD30P06000	J	AA	Screw,ø3×6mm
614	XJBSD30P10000	J	AA	Screw,ø3×10mm
615	XJBSF30P10000	J	AA	Screw,ø3×10mm
616	XJSSD30P10000	J	AA	Screw,ø3×10mm
618	XEBSD30P08000	J	AA	Screw,ø3×8mm

NO.	PART CODE	★	PRICE RANK	DESCRIPTION

SPEAKER BOX PARTS

901	GBOXS0112AWSA	J		Speaker Box Ass'y
901- 1	————		—	Speaker Box (Not Replacement Item)
901- 2	QCNWN2421AWZZ	J	AM	Network Cord
901- 3	PCUSG0138AWZZ	J	AC	Cushion,Foot
901- 4	QTANA9010AWZZ	J	AG	Terminal
901- 5	PCOVZ1022AWSA	J	AL	Cover,Duct Pipe
901- 6	PDUC-0015AWSA	J		Duct Pipe
902	CPNLS1074AW01	J	AV	Front Panel Ass'y
902- 1	————		—	Front Panel (Not Replacement Item)
902- 2	LHLDZ8002AWSA	J	AG	Catching Holder
902- 3	XJBSD30P12000	J	AA	Screw,ø3×12mm
903	CWAKP1074AW01	J	AS	Net Frame Ass'y
903- 1	————		—	Net Flame (Not Replacement Item)
903- 2	HBDGB1001AWSA	J	AD	Badge,SHARP
904	TSPC-1132AWZZ	J	AC	Label,Specification
905	XJBSD30P10000	J	AA	Screw,ø3×10mm
906	XJBSD40P12000	J	AA	Screw,ø4×12mm
SP1,2	RSPA00068AW6T	J	AR	Tweeter
SP3,4	RSPA10081AW6W	J	AY	Woofer

PACKING PARTS (EXCEPT FOR U.S.A.)

	SPAKA0395AWZZ	J	AM	Packing Add.,Unit,Left/Right
	SPAKA0396AWZZ	J	AL	Packing,Add.,Front Speaker,Top/Bottom
	SPAKC1510AWZZ	J	AU	Packing Case
	SPAKZ0963AWZZ	J		Sheet,Speaker
	SPAKZ1005AWZZ	J		Sheet,Net Frame
	SSAKA0007AWZZ	J	AB	Polyethylene Bag,Accessories
	SSAKH0094AWZZ	J	AE	Polyethylene Bag,Unit
	SSAKH0099AWZZ	J	AD	Polyethylene Bag,Speaker
	TLABN0100AWZZ	J	AB	Label,Serial No.
	TLABZ0593AWZZ	J	AB	Label,Energy Star
	TLABZ1340AWZZ	J	AC	Label,Pop

PACKING PARTS (FOR CANADA)

	SPAKA0395AWZZ	J	AM	Packing Add.,Unit,Left/Right
	SPAKA0396AWZZ	J	AL	Packing,Add.,Front Speaker, Top/Bottom
	SPAKC1511AWZZ	J		Packing Case
	SPAKZ0963AWZZ	J		Sheet,Speaker
	SPAKZ1005AWZZ	J		Sheet,Net Frame
	SSAKA0007AWZZ	J	AB	Polyethylene Bag,Accessories
	SSAKH0094AWZZ	J	AE	Polyethylene Bag,Unit
	SSAKH0099AWZZ	J	AD	Polyethylene Bag,Speaker
	TLABN0112AWZZ	J	AA	Label,Serial No.
	TLABR1291AWZZ	J	AB	Label,Bar Code
	TLABZ0593AWZZ	J	AB	Label,Energy Star
	TLABZ1340AWZZ	J	AC	Label,Pop

ACCESSORIES

	QANTL0007AWZZ	J	AK	AM/FM Loop Antenna
	QCNWN2430AWZZ	J	AM	Speaker Cord
	TINSE0498AWZZ	J	AQ	Operation Manual [Except for Canada]
	TINSK0145AWZZ	J	AF	Operation Manual [For Canada]
	TINSZ0892AWZZ	J	AG	Quick Guide [Except for Canada]
	RRMCG0347AWSA	J	AS	Remote Control
	GFTAB1049AWSA	J		Battery Lid,Remote Control

P.W.B. ASSEMBLY (Not Replacement Item)

	PWB-A1~4	92LPWB4763MANS	J	BW	Main/Display/Headphones/Jack
⚠	PWB-B1,2	92LPWB4763PWRS	J	BG	Power/Power
	PWB-C	92LPWB4751CDUS	J	BE	CD Servo
	PWB-D	QPWBF0027AWZZ	J	AD	CD Motor (PWB Only)
	PWB-E	QPWBF0322AWZZ	J	AC	Switch (PWB Only)

OTHER SERVICE PARTS

	UDSKA0004AFZZ	J	AZ	CD Optical Pickup Lens Cleaner Disc

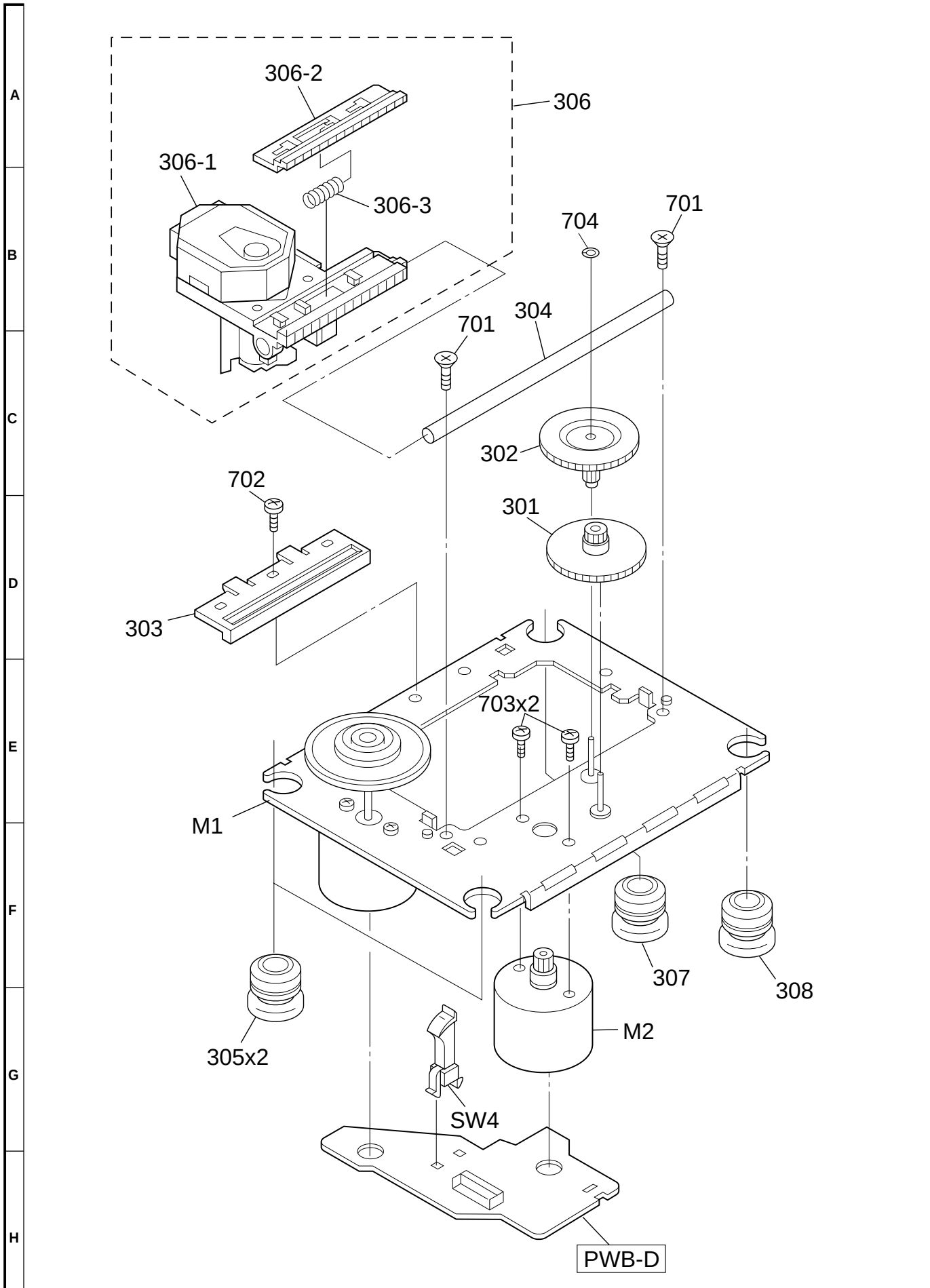


Figure 7 CD MECHANISM EXPLODED VIEW

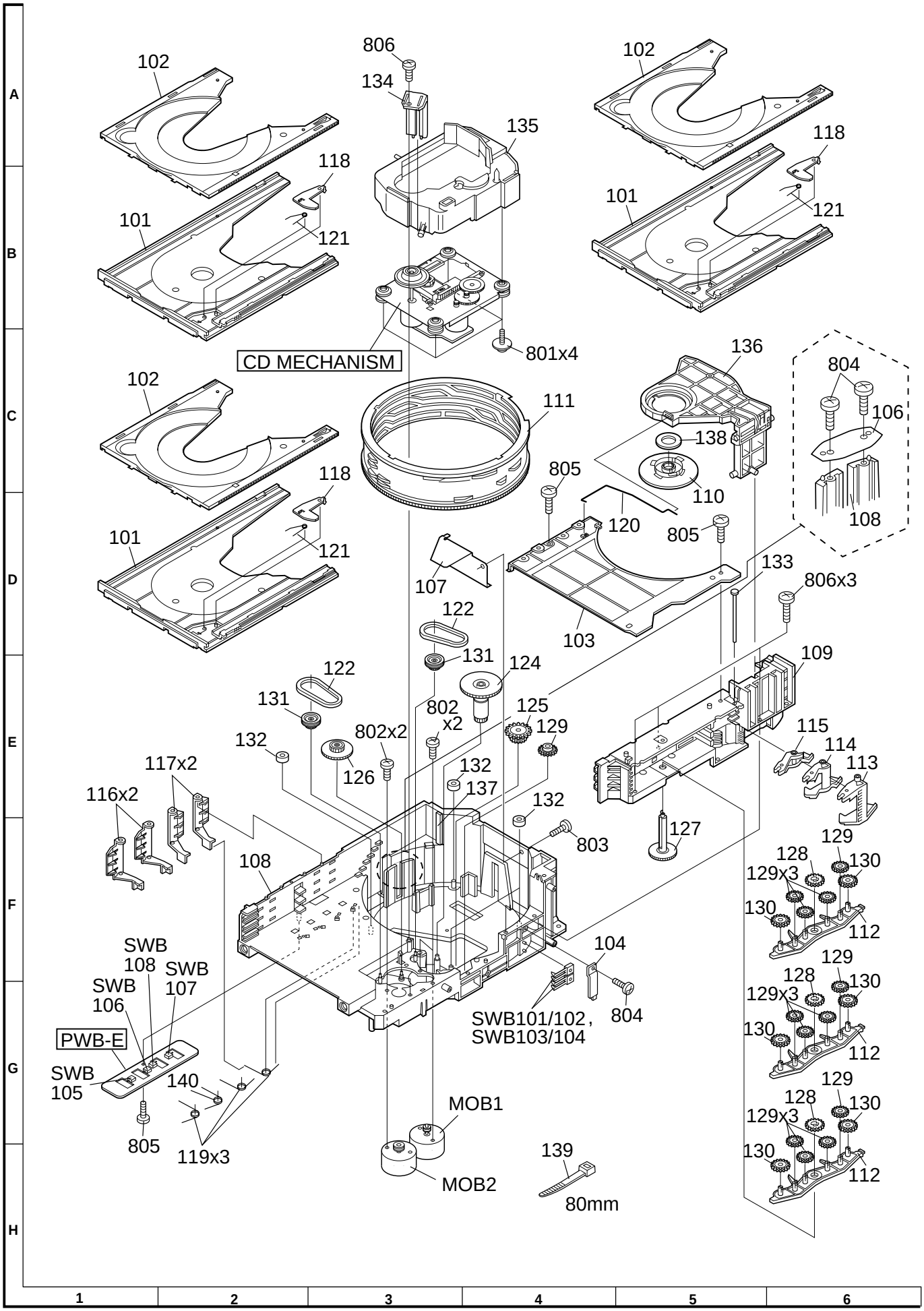
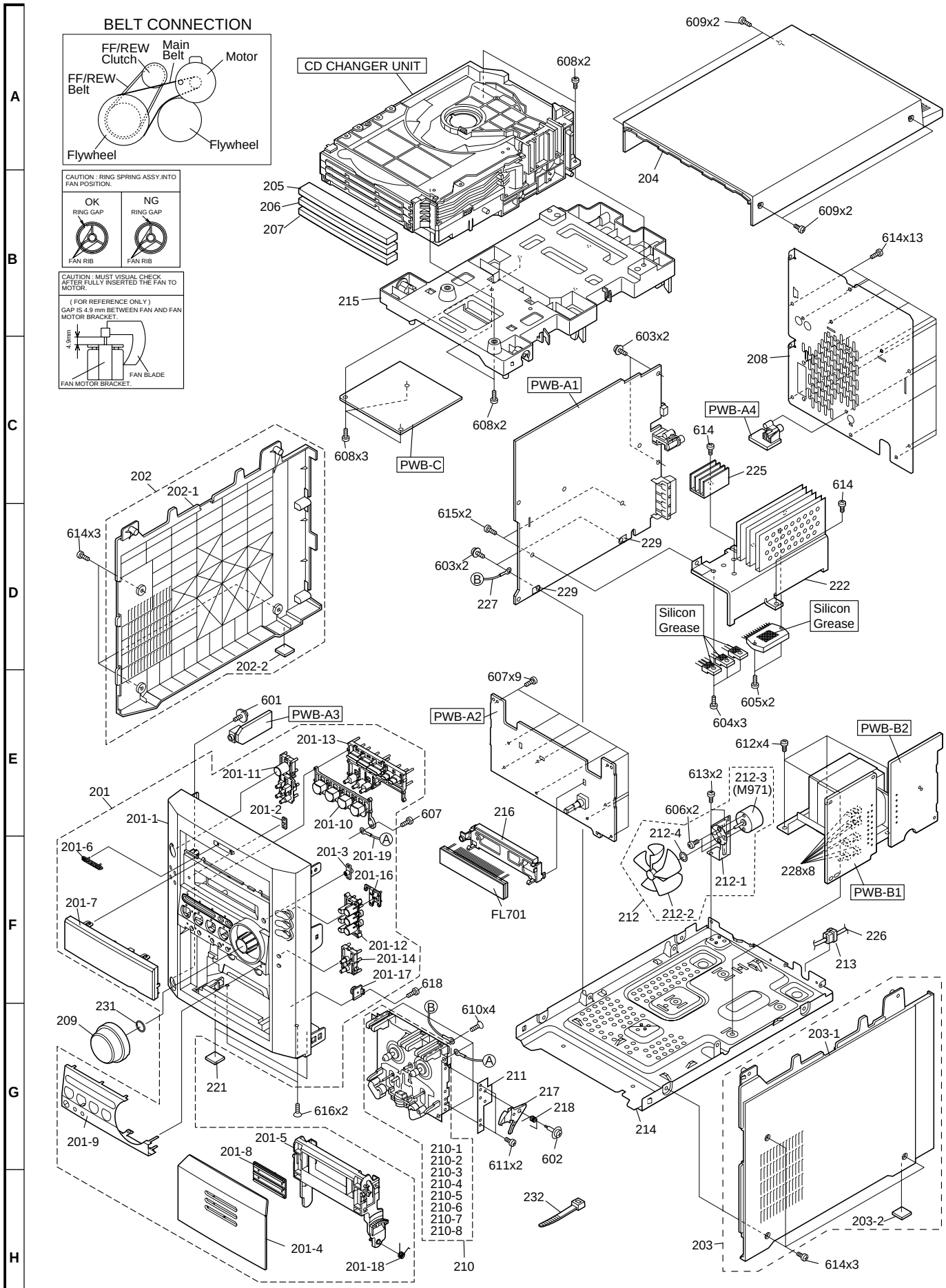


Figure 8 CD CHANGER MECHANISM EXPLODED VIEW



Note: Only the unit and consumable parts are supplied as parts supply for the Tape mechanism.

Figure 9 CABINET EXPLODED VIEW

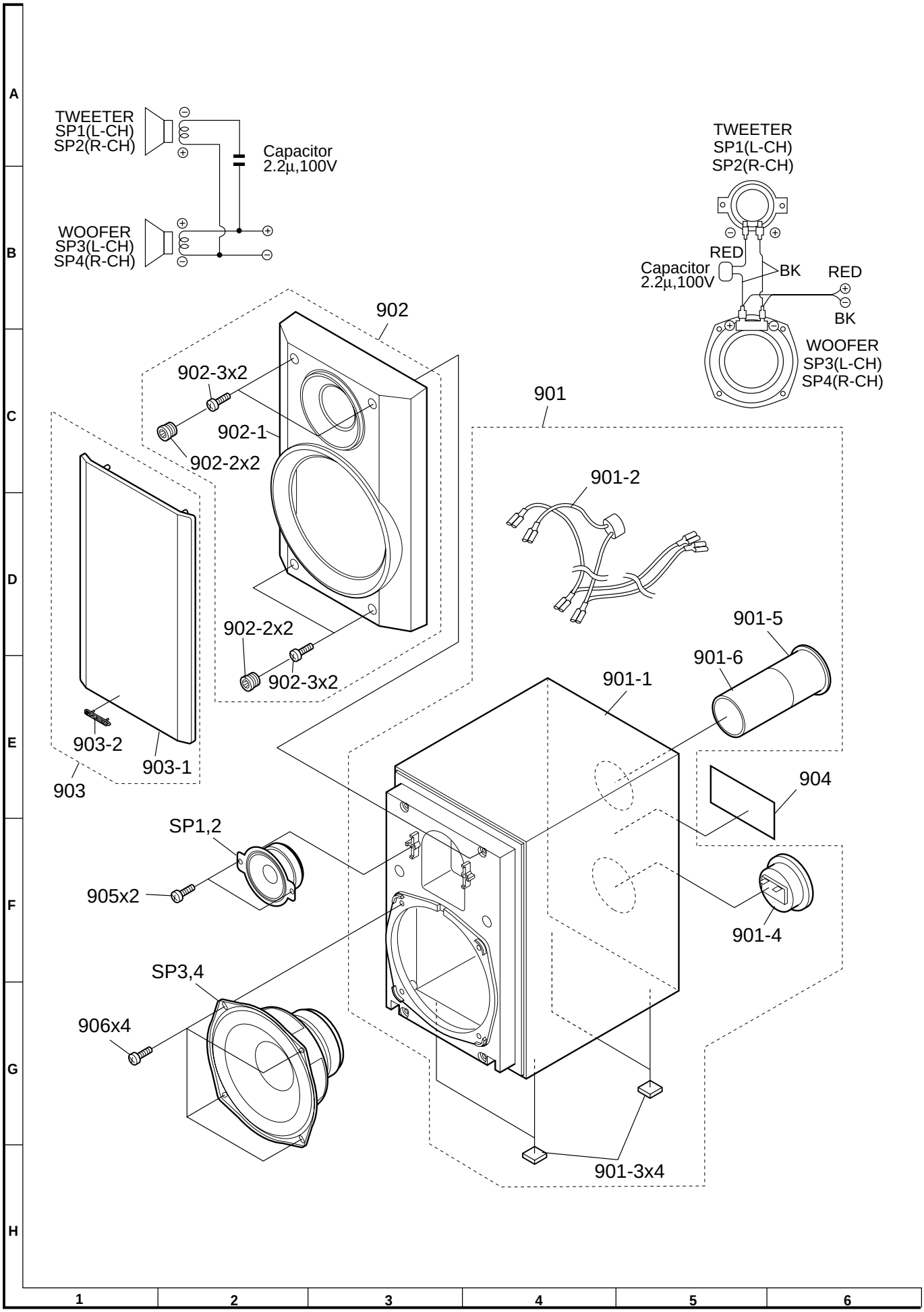
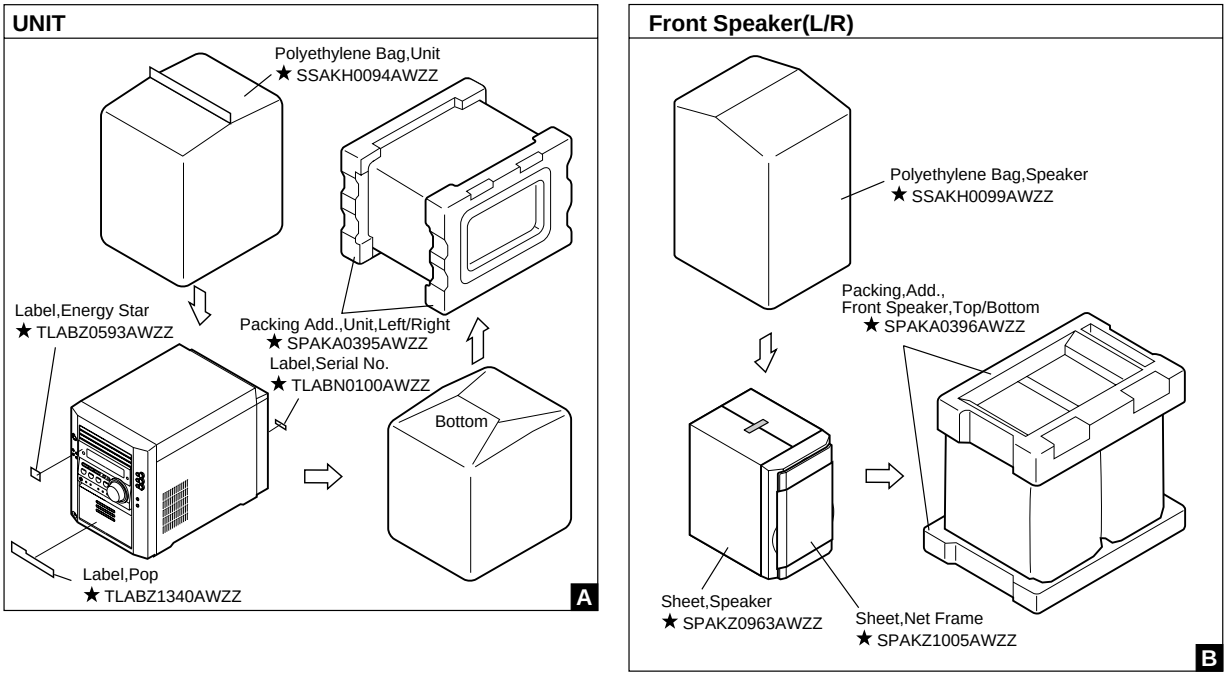
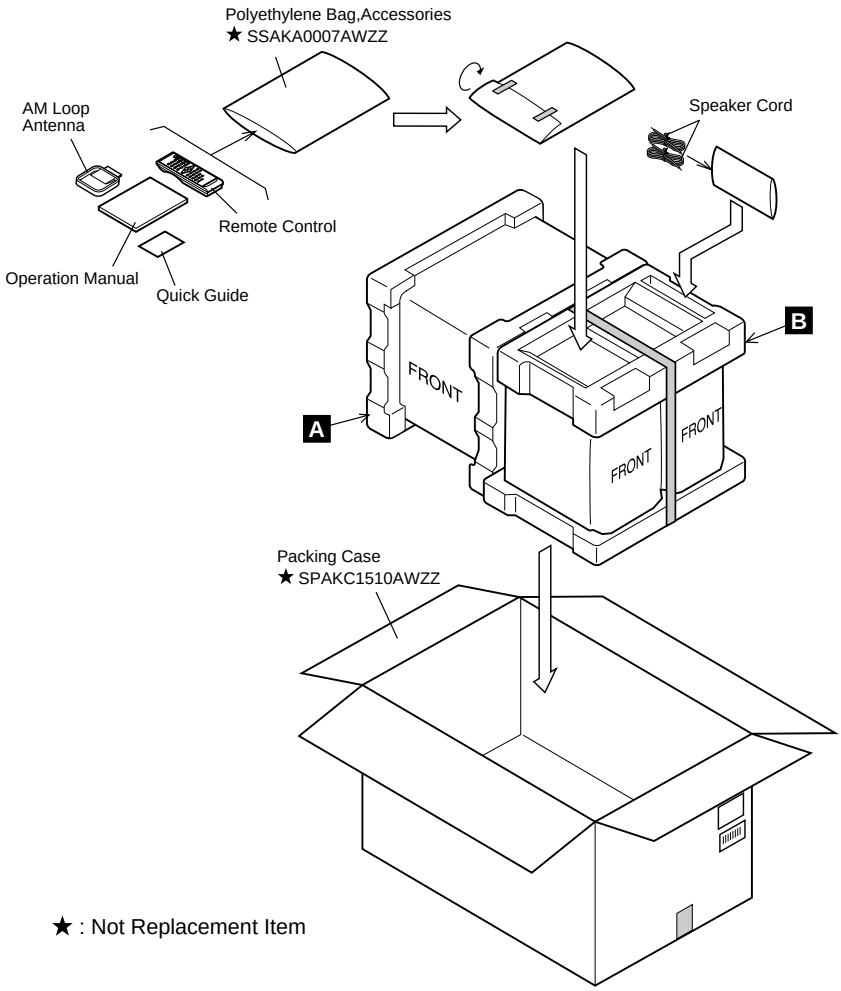


Figure 10 SPEAKER EXPLODED VIEW

PACKING OF THE SET (FOR U.S.A. ONLY)

Setting position of switches and knobs	
Tape Mechanism	STOP





★ : Not Replacement Item

–MEMO–

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